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Charlotte, N. C., January, 1919

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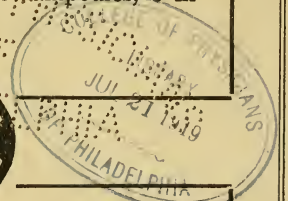

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The Charlotte Medical Journal

VOL. LXXIX CHARLOTTE, N. C., JANUARY, 1919. No. 1

NEURASTHENIA

By W. C. Ashworth, Greensboro, N. C.

Neurasthenia is usually defined as a condition of nerve exhaustion or nervous debility.

Neurasthenia may be due to many causes. In some cases it results from severe infectious disease; this is especially true in tuberculosis; it may be due to some general organic condition, diabetes, nephritis, constipation and auto-intoxication, pelvic disease in women, etc.; it may follow severe traumatism, overwork and mental strain, or emotional strain. But in addition to these immediate causes, Hartenberg says, "there must exist another factor, deeper-lying, more hidden which allows the exciting cause to become pathogenic. This deeply-rooted, hidden factor can not be looked for elsewhere than in a special predisposition on the part of the nervous system."

One of the most constant symptoms of neurasthenia is constant fatigue, disinclination for effort either physical or mental, loss of will power and the power of concentration. There is also nervous irritability, hyperactivity of reflexes, insomnia, etc., headache, vertigo, ringing in the ears, and heart palpitation and common physical symptoms. In many patients there is marked mental depression, this may alternate with periods of abnormal gaiety or hilarity without cause.

Hartenberg says:

"Fatigue is one of the essential symptoms of neurasthenic states. All patients complain with this emphasis of this invincible lassitude which overtakes them as soon as they wake in the morning and remains with them the entire day."

In the treatment of neurasthenia each case must be studied carefully; careful examination should be made for any physical or organic condition causing or complicating the neurasthenia, and if such conditions are found, they should be given proper treatment,—which sometimes may be surgical.

With organic causes eliminated, the treatment of neurasthenia, Dr. Ferebee says, "should embrace rest and isolation, massage, electricity and hydrotherapy superalimentation and drugs. The personality of the nurse in charge of such a case is important. A tactful, resourceful nurse, one who can preserve an equable, cheerful demeanor and can divert the patient from his gloomy forebodings and autoclinical observations, is a great desideration. The physician should impress his patient with confidence, make him believe that he understands the case, that he is going to get well, and when the setbacks come, as come they will, allow the patient to see that the physician is not discouraged, that he had counted them in advance, and that his opinion is unchanged."

Dr. F. Beach, discussing the educational treatment of neurasthenia, refers to the necessity of rest, at least for a time, saying that in the case of a woman, she must be relieved from all household cares and worries, while a perfectly hygienic life must be led with strict attention paid to diet. This latter should be good, plain, and abundant, milk, cream, eggs, farinaceous food, fruit and vegetables being given at first, and when the patient is stronger the ordinary diet may be resumed, but "no alcohol should on any account be permitted." A change of air in connection with moderate exercise may be prescribed later.

While many physicians advocate some form of rest cure, at least in beginning treatment, Dr. Riggs does not approve of the absolute rest in most cases, he says:

"On'y for complete physiological bankrupts should rest be at all an important item, and, even in these cases, I have never continued it at an aggregate of over three hours daily, exclusive of the night, for more than a week or ten days. Rests, though short, should be made as perfect in quality as possible; that is, patients should be taught how to rest."

Dr. Riggs outlines the important part of his treatment for neurasthenia as follows:

"Fundamental re-education of the patient is the weapon in which I put my greatest trust. To teach the neurasthenic what neurasthenia is, to teach him to contrast this state of mind with the normal, to show him that he can attain this normality is, I believe, 75 per cent. of curing him. The other 25 per cent. consists in applying this knowledge to practice.

"Coupled with re-educational psychotherapy there must be, of course, rational

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physical treatment, based on the particular need of each patient. This part of the treatment is carried out according to a definite schedule in which exercise plays an important role and includes individual calisthenics, as well as out-door walks, golf, skating, or snow-shoeing; while rest plays a distinctly subordinate part. Rests are considered rather as object lessons in re-education illustrating what non-interference and non-responsibility will do, than as important physiological items. Occupation, both manual and intellectual, I consider one of the most important instruments of re-education for through it one can teach efficiency more objectively and more directly than, perhaps, by any other method."

The war has given rise to several interesting studies of neurasthenia under war conditions.

Dr. Barker says:

"Contrary to what may be expected, patients suffering from nervous states not due to organic lesions, though they have been fairly numerous, have, in reality, made up a very small proportion of the total number capacitated for war."

Dr. Hurst, writing of English conditions in September 1917, says:

"Although it would require an exceptional nervous system to pass unscathed through twelve months or more of war under modern conditions uncomplicated neurasthenia due to prolonged physical strain, the utter nervous exhaustion caused by pure physical fatigue, has been comparatively rare since the battle of the Marne. But there were many cases after the retreat from Mons, and it says much for the spirit and discipline of the original Expeditionary Force that there were no more."

Dr. Collie says:

"Most, if not all, the cases of neurasthenia arising in the army are the result of actual concussions (shell shock) or the conditions prevailing in modern warfare."

While it is true that strong and normal men break down under the nerve-raking conditions of modern warfare, it seems only natural to suppose that men with any neurotic tendencies or antecedents would give way sooner under the pressure of conditions at the front. Many phases of military life, the strict discipline, the open-air life, the physical exercise and the influence of army "morale" are undoubtedly favorable to the overcoming of neurotic and neurasthenic tendencies. It is life in the trenches and under fire that tests the nerve strength of men. It seems to be the almost universal opinion of English medical men, that some history of a neuropathic constitution or inheritance is to be found in a large percentage of cases of war neurasthenia, whether due to shell-shock, or over-strain. But, of course, this is not true in all cases.

Dr. Mott states that only about one-third of the cases of neurasthenia or hysteria conditions following shell-shock occured in "potentially sound" individuals.

Symptoms of shell-shock, Hurst says:

"Occur most readily in men with neuropathic inheritance, and in those who are abnormally emotionally or have previously suffered from a nervous breakdown or concussion of the brain as a result of injury to the head."

Dr. Collie says:

"Neurasthenia is often found among men remarkarble for their bravery, daring and initiative, men who have been dispatch bearers, snipers and leaders of forlorn hopes.

"Tried soldiers show the same symptoms as young recruits. Many of these soldiers are brave men but they are temperamentally and neuro-potentially unfit for the awful work which they have volunteered to perform.

"If we at home could successfully tackle the problem of differentiating between who is and who is not a potential neurasthenic we should prevent wastage of the personnel in the fighting line, the lowering of the morale of the men in active service, and the denuding of the country of men useless in the field, yet capable of valuable work for the Army at home."

Dr. Burton Fanning says of the neurasthenic recruit:

"In the majority of cases I can not believe that real fighters will ever be made of them. The lifelong neurasthenic is not likely to endure cheerfully the privations and hardships of campaigning and will prove more of a nuisance than a help to his regiment. Nor can the neurasthenic be fired with the spirit required in attack and the willingness to make the supreme sacrifices. But there should be plenty of work at home or behind the line of which they are quite capable and which after a little treatment, perhaps, they should perform efficiently."

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Meta-Chancre, Preroseolar Meningitis.—Lavau (Annales de Dedmatolgie et de Syphilographie) reports the histories of 9 patients in the primary stage of syphilis, in 6 of whom there were changes in the cerebrospinal fluid. He shows also that two-thrids of the cases had meningitis before the outbreak of the eruption. This meningitis expresses itself by headaches, but usually it is latent and can only be revealed by examination of the cerebrospinal fluid. The symptoms of the meningitis may be increased by an intravenous salvarsan injection; the patients then have vomiting, photophobia and Kernig's sign.

This reaction is not, however, constant and is not by any means parallel with the changes in the spinal fluid. It may be absent in spite of pronounced changes in the fluid and may be frequently present notwithstanding a normal liquor cerebrospinalis. Lavau asks if a part of reaction cannot be blamed on the lumbar puncture

After the augmentation of the symptoms Lavau found that neosalvarsan works excellently on the menigitis which is at times very resistant to the therapy. It may however disappear spontaneously. In pronounced changes of the cerebrospinal fluid in the beginning of the secondary period one must be very caretul with the dosage of the neosalvarsan.

WHAT IS IT?

By W. E. Reynolds, M. D., Hopkinsvlle, Ky.

I will present the subject in three parts: Life, Disease and Death. We can't have death without life, and necessarily disease. And as it is written in the divine Scripture, without death we can have no life, as we look at living beings, breathing, seeing, moving and possessing all the atributes of a living creature, we know there is such a thing as life. The heart throbs with sufficient force amid its normal boundary, while the lungs expand to full capacity without our apparent knowledge, through that wonderful complex gigantic power, the brain. How wonderful and mysterious, every organ within the body receives its instructions. Each muscle or group of muscles move as by magic in any and all directions. The sense of touch and hearing while guided by this great nerve center, all go to prove a living being. While we look at a dead body we miss that characteristic appearance of this something that we call life.

Life is to my mind as incomprehensive as the divisibility of matter, or the length of space. Could we but step from earth to the nearest fixed star, and span this space in a straight direction at each stride from childhood to old age, without the appearance of the end would approximate space. The divisibility of matter may have a limit, but beyond our comprehension.

Life: an inanimated existence, a breathing soul, the supernatural, rational and immortal part of man. The breathing soul. When God had finished this ball of mud, he breathed into his nostrals the breath of life, and man became a living soul. While considered the immortal part, and is independent of the corporal existence of man, yet so connected as to be a part of an eternal something, of which we have not the power through any or all of our senses to grasp; and yet with this medium our bodies would be as dust from whence it came.

To say that the mind of man is the living soul would be a point in argument favoring that some man had a brighter soul, or an idiot had no soul. As some have a more comprehensive mind or the idiot had no mind at all.

And again, the brutal or beast creation, have they a soul? They have life, and it is written in the divine book, man hath no pre-eminence over the beast. Who can say man goeth upwards, and the beast goeth downward. And we may continue our mysterious subject to that of the plants, they have life. And who knows if it was possible for the vegetable kingdom to speak with intelligence to man, we might be taught an important lesson.

In considering this part of the subject it should be an individual thought, and each individual has no better law by which to govern him than his individual thoughts, which he receives through inspiration. An atribute of this life that teaches every human being on this earth, there is some supreme mystic power. We have hate, love, and anger, the elementary parts of the spirits. An we can only know about these factors by the results. And in this way may gain some idea of the principles of life. Conscience holds a close relation with the soul and connects it with or to the life of man. It's the judge of right and wrong, and it is not only man's judge while he lives here on earth, but confronts him in his final reckoning.

Conscience receives all impressions gained by the spirits through the five sensory nerves. And makes the impression in this book of life ,the mind, or living soul. So through this arrangement of conscience mind and soul we may have some communication with the soul. For instance, we may be impressed by grief of a dear friend to the extent of weeping, or exhilerated to that of emotional joy. There is a distinct communication of the soul to that of another by emotion, words, sounds, and acts. And yet since man was ejected from the garden of Eden, and for that first sin, he, was refused the taste of the tree of life, and he is, and will be ignorant of life while he is connected to the flesh of the body. We often observe in the features, sorrow, grief o rtrouble. Or on the other hand anger, vengeance and destruction, or again joy, myrth, happiness and pleasure. All this communicated to us without a word spoken.

Music, not only charms us, but the savage or the ferocious beast. This is a communication in a spiritual way. But we have never had words to express or explain that emotion in a way intelligently enough that we may conceive the realities of life, soul or spirit. We may have life temporarily suspended and when again united to the body, no one has become any wiser about this living soul. And while this life is disconnected from the body, I believe we are in full posses-

*Read before the Academy of Medicine, Hopkinsville, Ky.)

sion of the realities of life eternal. But so soon as life is restored, the bright light of eternity goes out.

The divine Scriptures likens a man unto a tree that bringeth forth good and evil fruit. As such he is possessed of two spirits, one in harmony with God, divine, shuns sin, is love, kindness and peace to all men, and is reverenced by every creature on earth. The other is prompted of the Devil, sinful, of the lust of the flesh, everything that is degrading and mean, that hides from justice, seeking unknown secluded places, ashamed of that, that is divine. These two spirits characterizes man's life, prompts his every action. As it is written judge ye the tree by the fruit. The spirits gather both good and evil, and bring it to the great judge, conscience. While the act may be condemned or commended by the judge, but it is written in the book of memory to be opened on the final judgment. However, we may have the prosecuting attorney, reason, to interfere and stop the persistent of the evil spirit, if so a concillatory record is rendered. But if a good act is intended and overruled by the evil spirit, it is condemned and indelibly stamped in the book of memory.

It is through this communication of spirits, that often deter or persuade a good spirit to error and lead a reckless life, also by the continuous association of divine surrounding, the evil intent is constrained to launch into a higher and divine circle. Hence the importance, not only the young, but old to shun the temptation assisted by the association of spirits prone to evil.

Reason is the intermediate or mediator of the soul and conscience to man or body and connects the flesh, to the conscience through the nervous system. Hence you see no pain is experienced or produced, by laceration of the flesh without the message being delivered to conscience through reason. Consequently it is not the flesh that experiences pain, but life which also takes care of the flesh. And when the nerves are disarranged either by medicine, delusion or disease, then reason, the attorney general, has no proof to bring before conscience, and this judge may render an imperfect decision. As such we may have no pain or the act of a man, although vile is irresponsible for the act. Insanity, while it is an inherited predisposition, yet I am thoroughly convinced of the fact, that it is established by the patient continually concentrating the mind on one thing, as to cause a disarrangement of the faculties of the mind, whereby an erroneous conception is registered. This might be termed auto suggestion conveyed by the patient themselves. (This might be a lesson in the treatment of insanity to divert the mind from its hypnotic influence before they are permanently doomed to their fate.) An insane person has no fixed purpose in view they may take the life of the dearest or most innocent of the family, which is the role, without the remorse of conscience or argument of reason. No insane will take your life because of some controversy (and all courts should so instruct the jury), his hobby being founded on wild hallucination, and imperfect desicion of conscience.

Innocense fears no danger. Consequently an insane is irresponsible for his deeds, while on the other hand no man should be shielded by the law when found to have the least cause for the act. Of all criminals, that deserves most punishment, are those who go crazy after committing their hellish acts.

Disease, the opposite state to that of health, consisting in a change, either in the position and structure of the parts, or in the exercise of one or more of their functions or in both. The chief elements of structural disease are dependent on multiplied cell action. So as we begin to live we also begin to die. Disease and life oppose each other and are in continual warfare, while disease is continuously destroying the flesh, life is making every effort to supply new tissue, and antibodies to protect the same. This seems to be automatic, when disease attacks the flesh, life calls out its forces, rushes the blood to the parts and surrounds the infection with its chemical and physiological changes, picking up all the poisonous bacteria, and carrying it out into the system, where it can be effectually destroyed and eliminated. We give medicine to effect certain organs through the nervous system by which life may take care of itself. The Osteopath excites the nerve about the effected parts that life may rush the blood there to do the same. And in this way many cures may be accomplished in some forms of diseases. This mode of practice was used very anciently, and possibly originated in the days of the administering of the blessings by the laying on of the hands.

The Spondalothropist scientifically touches the origin of the nerves in control of such parts, adjusting the impinging structures to which life responds directly to this call and makes every effort to remove the cause of the trouble.

The Christian Scientists try to swindle life out of her pain by delusion separating life from the effected parts, while some wonderful repairs are accomplished.

This treatment is more like hypnotism. And while I have read but little, and in fact there has been a limited amount written on psychology, as such my remarks are based on my own reasoning faculties. But I must say hypnotism is a most wonderful thing, a complete delusion of the mind, a disarranged reason by which conscience may make such decisions as you may suggest, to handle the mind of a man as if it were your own. So threatening are the symptoms that This seems almost increditable but none-

The laboratory furnishes life with the paraphernalia that will soon succeed all other treatment, and by this serium therapy and autogonous injections, life buckles on nature's own armor of protection, and combats successfully many diseases that could not be cured by any other treatment. However we are becoming more proficient every day, yet we can never procure perfect success.

Soon there will come a day when this warfare will cease and life will take its eternal flight, this body wil be surrendered to its original habitation to return to dust, and enter into new life. Such as the vegetable kingdom. And my mind is especially reflected to the representative plant or flower most congenial to each individual. I imagine how rich in color, fragrant and sweet the fumes and aroma that floats the breeze from the rose grown over the grave of this band of brother physicians. This would be a tender and precious thought to know that none other than the tender hand of a dear friend or fair maiden would pluck the rose or bask in the rich perfumes of our new life. But alas, here comes a worthless cuss who has stolen from you the hard laborious work while you lived, and now seeks to rob your grave of the fragrant flowers. May he be cast out upon the desert plains to be consumed by the vultures of the air and by dogs to enter into their life with which he is most congenial.

Life with all its atributes will have been called to order by the great judge, conscience. On either side the two spirits, good and evil. And in front the attorney general. The book of memory is now open and from its pages life will face all deeds and acts of the body.

This gentlemen, is a sad thought. Who will be able to answer the roll call. Who will be able to call out, "Oh grave where is thy victory, oh death where is thy sting." You have, I am sure, a very few times visited such characters as were reconciled, anxious and waiting for the momental ordeal. And while you desired to shed that sympathetic tear with friends and dear relatives, you are more constrained to rejoice in the happiness of your dying patient.

No creed or religious doctrine will be taken for, or in part of compensation. No mode of baptism will save a burdened and burning conscience. oNthing will suffice except a clear conscience, as it is written, "the heathen is either accused or excused, they having a law unto themselves. So if man has failed to satisfy his conscience in this life, his work will have to be completed in his life eternal.

But my professional brother, I feel like when our light has gone out on this earth, it will be with us like night when it has wrapped its sable mantle around and pined with a star. We will awake in that bright celestial morn, in a land that knows no trouble or sorrow. Our great struggles of this life will be buried with the body, and our book of memory will be opened, and to our credit, wil be found so many deeds of kindness, charity, and good will to all mankind, that what few misdeeds we have committed will be omitted, and remembered against us no more. Then we will strike hands and know what is life, life, eternal life to live forever as angels.

A Common Origin for Shingles and Chicken-pox.—Le Feuvre (British Jour. Dermatol), believes there is a close eitological relationship between herpes zoster and chicken-pox. He has collected about 50 cases, 7 of which were under his own observation, in which these diseases occurred so closely associated as to suggest the probability that they had a common origin. In the author's 7 cases an attack of zoster was followed in from twelve to twenty days by chicken-pox in some other member of the family, in all cases a child. Of the whole number of cases collected 41 showed this sequence, while in a much smaller number (5 cases) zoster followed the chicken-pox; in 4 cases the two diseases were concurrent. The author believes shingles to be an infectious disease, which, under certain unknown conditions, may serve as the starting-point for an epidemic of chicken-pox, and should therefore be placed in the list of notifiable diseases.

AUTO-INTOXICATION AND ITS TREATMENT.

By Dr. G. N. Murphey, Paducah, Ky.

Auto-intoxication is man's most deadly enemy and is as old as the ages. As its name implies, it is a self poison which is the result of non-elimination of effete matter of the animal organism. Its greatest source arises from the bowel track, although tissue waste claims its share as well.

Prominent among the ailments which result from body toxins are rheumatism, gout, neuritis, nephritis, diabetes, headaches, and many others too numerous to mention. Of course, it is not responsible for those diseases that come from without the body as the contagious and infectious ones.

Notwithstanding its universal recognition as a mischief maker, its treatment has been most unsatisfactory. The burden of this article is to give my own treatment, which is original, for auto-intoxication which I have found most efficient.

In January, 1916, I had an attack of neuritis in my left shoulder and upper left arm. From its inception it was severe and rendered my arm almost helpless. I was unable to extend it at right angle to my body or to carry it backwards and up. I could not put my collar on or off. At first I paid but little attention to treating it as I hoped for a spontaneous recovery. After waiting six or eight weeks for improvement, I found my condition no better. I then tried the electric spark from a coil machine for more than a month but got no relief. I consulted one of our best practitioners who recommended gelsemium in combination with some other drug which I do not now remember, but like the electric treatment proved inefficient even to modify my trouble.

I wrote to a physician of prominence in Chicago and asked him to prescribe for me. He wrote me and expressed his regret for my condition and only suggested that I have my teeth examined for pus cavities. This I did but the dentist pronounced my teeth in a healthy condition.

I then took over my own case for treatment and set myself to thinking what the cause could be for my neuritis, this was about nine months from the beginning of the attack.

I soon concluded that it was the result of auto-intoxication. I based my conclusions on the fact that my stools had a putrid odor, my color was anaemic and had been for many years. I had frequent attacks of heart palpitation always accompanied with profuse sweats and a feeling of utter exhaustion. I also suffered with occasional attacks of pectrodynia in the right pectoral muscle. I had chronic eczema all of which I believed was caused by auto-intoxication. Now the question was how shall I treat it. I had frequently tried those remedies suggested in our text-books on practice of medicine but only with feeble, if any permanent effect. The doses recommended in the text-books are all too small and besides they are absorbed by the stomach and do not reach the bowels where the foul poison fecal matter lies, hence the only influence exerted on the toxins was in the circulation and that only to a limited degree. My idea was to find some good antiseptic that could be brought into direct mechanical contact with the poison and neutralize it before it was absorbed into the circulation, also to clear out the bowel contents and keep the alimentary track antiseptic.

It occurred to me if the antiseptics were incorporated in Russian Oil it would be an ideal plan of treatment if the bowels were well evacuated at frequent intervals and the diet regulated so as to leave out largely the albuminoids which are so largely responsible for auto-intoxication. With this in mind, I formulated the following prescription:

Creosote	zii
Tinct Iodine	zi
Oil Turpentine	zi
Oil of Cloves	zi
Thymol	gr viiss
Menthol	gr viiss
American Oil (P. D. & Co)	Zxvi

Tablespoonful night and morning followed each alternate morning with a saline flush.

I also cut out all lean meats, eggs and cheese, pastries and highly seasoned articles of food. Under this plan of treatment I made a complete recovery not only of my neuritis but of all the other troubles of which I had been suffering named above.

A healthy pink flush returned to my cheeks and for the past eighteen months my health seems absolutely perfect. In searching for a silver mine, I discovered gold. I have since used this treatment on others with the same gratifying results.

In some cases this treatment produces a pruritis of the arms and legs and more seldom of the trunk. In such an event discontinue the treatment for a short time until the itching subsides.

Most of these antiseptics pass through the stomach and bowels and their characteristic odor can be detected in the stools, but some of them are absorbed into the general circulation and are eliminated by the kidneys, skin and lungs, hence, every tissue of the body is brought in contact with the antidote or antiseptics.

I have varied the antiseptics, leaving out some in the above formula and substituting others, for instance, using Oil of Cinnamon for Oil of Cloves and Oil of Eulyptus instead of Tinct. Iodine, sometimes using Menthol only and leaving out Thymol. Sometimes I add Carbolic Acid, one dram, but I find all to act equally well. All of these drugs are held in suspension in the oil except the tincture of Iodine which will precipitate in a few hours after it is mixed by shaking. Always shake the mixture before taking. The dose is somewhat pungent and ought to be followed with a drink of water.

I also consider liberal water drinking, two or three quarts every twenty-four hours, an important factor in promoting elimination of waste matter of the system.

I took five pints of the oil containing the antiseptics before I gave up the treatment of auto-intoxication, and even now whenever I feel any symptoms of self-poisoning, I resume the treatment until all signs of trouble disappear which they usually do in a week or two. This is seldom necessary, however, as I generally go from three to five months without any signs of trouble.

All who may try the above method of treating auto-intoxication and stick to it as faithfully as the writer, I feel sure will be amply rewarded for his trouble.

By supplying to shed blood one of the necessary physiological constituents to the formation of a clot it is possible to hasten blood coagulation. Hemagulen, a product of the Lilly Laboratories, contains this necessary thromeboplastic substances from fresh brain tissue. It is sterile and is suspended in a physiological saline solution and preserved with a 0.3 per cent. cresol; it is tested physiologically and standardized. Hemagulen is indicated in persistent hemorrhages from capillaries and small vessels where it can be applied to the bleeding surface. It is also given orally in doses of two to eight drams, diluted with water, in cases of hemorrhages from gastric and duodenal ulcers. The drug trade supplies Hemagulen in ounce bottles.

REPORT OF A CASE OF FOREIGN BODY (CARPET TACK) REMAINING TWO YEARS IN BRONCHIAL TUBE WITHOUT PATHOLOGIC SYMPTOMS

By Dunbar Roy, M. D., Atlanta, Ga.

In the present day refinement of bronchoscopy it seems much out of place to report a foreign body as remaining in the bronchial tube or even in one of the twigs, without its removal. Authors always publish their successes, but few have the temerity to report their failures.

The writer has done but little clinical bronchoscopy, for he long ago realized that this work should only be undertaken by men, who from a natural apitude in working along this line have placed themselves in a position to have these cases referred to them, increasing thereby their clinical experience and rendering themselves more proficient in obtaining good results.

The writer believes that there should be such a thing as a perioral specialist in different parts of the country to whom such cases could be referred and from whom the patients could receive the best operative skill.

It is a matter of impossibility for men who only occasionally see cases of foreign bodies in the bronchial tubes, to keep themselves in that extreme practice which is absolutely necessary for dexterity in the removal of these bodies.

While no laryngologist is willing to allow a foreign body remain in the bronchial tubes if it is possible to extract the same, cases however have been reported where the foreign body has remained in situ, either finally producing a localized lung abscess or becoming encysted, remaining in this manner without producing any untoward symptoms.

The present case is reported, not with the idea that there may not be some future trouble, but one of interest in that up to the present time, two years since the accident, the patient has remained in good health with no symptoms of discomfort.

Miss C. E. D., age 28 years, domestic, gave history of eating puffed rice and in some unknown way sucked into her larynx a small brass head carpet tack. She was immediately seized with a violent spell of coughing and some difficulty in breathing. She consulted Dr. Crawford who had an X-Ray taken and this plate showed the tack in the right bronchial tube between the seventh and eighth ribs with the head of the tack

pointing down. She was sent to Grady Hospital and with the assistance of Dr. Crawford and Dr. McDougall I attempted its removal under local anesthesia, using the Brunnings bronchoscope. Our attempts proved unsuccessful, so we decided to allow the irritation to subside and on the next day passed the bronchoscope through a low tracheotomy incision. We then made use of the fluroscope and in this way atempted the removal of the foreign body under a most excellent shadow. It seemed as if the foreign body was in one of the branches of the large tube causing us to be unable to grasp and dislodge the tack. After several attempts we decided to desist from further instrumental manipulations and allow the tracheotomy wound to heal, leaving the foreign body in situ for fear of more damage than the presence of the tack itself. Patient experienced no further trouble and remained comfortable. No temperature, cough, or expectoration after the first few days. Patient then continued her work without interruption. On November 14th, five months later at a meeting of the Southern Medical Association, our Fellow, Dr. R. C. Lnch, undertook again the removal of the tack. The X-ray showed that it was in the same position. Under general anesthesia Dr. Lynch had no difficulty in passing the bronchoscope, although he found that all the tubes he possessed were too short. He also located the foreign body in one of the side bronchial twigs. Not having the necessary length tubes and being unable to obtain the same in our city, the foreign body still remains in the same position as previously shown.

Following this second operation the patient experienced no difficulty whatever and in a few days was again at her domestic work. I have seen her several times since, now about two years since the original accident and she has increased in weight with every evidence of no discomfort. I show you two X-ray photographs. The first is the one taken at the time of the accident and the second just a few days ago.

A somewhat hurried research into literature for accounts of foreign bodies in the lungs or bronchi of two or more years sojourn, brought to light notes of forty-seven cases, or forty-eight including the personal case. Since continuation, the author feels that not many have been overlooked, although to make sure, it would be necessary to read over hundreds of case reports and discussions of papers. The importance of the subject is hardly such as to warrant such an outlay of time and pains.

The age of the patient, the kind of foreign body, the immediate symptoms, and the fate of the patient need not greatly concern us in this particular collection of data, for in the first place they throw no light on the main question of length of sojourn in the chest. As might be expected the longer the sojourn, the fewer the number of cases. The number of cases in which the sojourn was two years or less than three years was ten. Had we noted the cases of one full year and less than two years, this would have been correspondingly larger. The number of cases of sojourn of three full years and less than four years was six; of four to five years, two cases; five to six years, two cases; six to seven years, three cases; seven to eight years, five cases; eight, nine, and ten years, two cases each. These irregularities disappear if we proceed by five year periods. Thus from two to seven years, the total number was twenty-three cases; from seven to twelve years, the total number was thirteen cases. The number from 12 to 17 years exclusive was four cases, and that from 17 to 22 years exclusive was two cases. These figures show plainly that the more remote the period of operation, the fewer the cases.

Gross in his monograph on foreign bodies in the air passages (1854) could make but two classes of cases, to wit; those in which the foreign body was coughed up and those in which it was found at autopsy. Since about 1897 two other classes have been added—those removed by bronchoscopy, and, in theory at least, those recognizable (but not removed) by the X-ray. A fifth class is also possible—those removed through the chest wall.

Some interest doubtless attaches to the foreign bodies of longest sojourn. The record is held by an old American case—that of Bartlett, reported in 1846, in which a chicken bone swallowed at the age of three years was coughed up sixty years later. Chevalier Jackson is second, with a record of twenty-six years sojourn for a collar button removed with the bronchoscope. The third place is held by the case of Eldridge of Rhode Island, the sojourn being twenty-three years; the case was reported in 1860 and the reference does not mention the nature of the object. The cases of Lescure in the 18th century and of Beer of New York in 1916 are tied for fourth place at seventeen years. The former was one of

expectorated bone, and the latter one of a paper clip removed with the bronchoscope.

A case of fourteen years sojourn was reported in 1876 by Reclam, in which the foreign object was a needle. Of more [illegible] interest was the coincidence in which two Americans, Whitley of Georgia, and Woolsey of Tennessee, two years apart, 1878 and 1880, reported duplicate cases of a cockle burr coughed up eleven and twelve years respectively after aspiration. We omitted to mention in its proper place the case of a pin coughed up after sixteen years. The case was reported in 1886 by Colquhon of Australia. Another case of long sojourn was reported in 1842 by Carpenter of Guy's Hospital, in which some teeth were found in the lung at autopsy, thirteen years after aspiration. During the present year, Walters of California, has reported the removal with the bronchoscope, of a piece of bone aspirated eleven years before. The longest sojourn in Killian's practice seems to have been a needle for ten years. Another ten year sojourn is recorded by Dupuytren in connection with a coin. It seems hardly worth while to continue this narration because of the complete want of type. There appears to be no reason why any kind of foreign body cannot sojourn in the lung for any interval.

Physicians generally, recognize the value of ipecac in many winter ailments. Ipecac is a drug that has long been favorably known and highly regarded, but due to its nauseating properties its field of usefulness has been restricted.

With the advent of Alcresta Tablets of Ipecac, made by Eli Lilly & Company of Indianapolis, what may be said to be a renaissance in ipecac therapy has taken place. By means of these uncoated, rapidly disintegrating tablets it is possible to administer, orally, large doses of ipecac without nausea. Each tablet represents the alkaloids from ten grains of the drug and the nature of the compound with hydrated aluminum silicate is such that the alkaloids are not liberated in the acid secretions of the stomach, but are promptly released on coming in contact with the alkaline intestinal secretions. Those physicians who, on account of its nauseating properties, have not been prescribing liberal doses of ipecac in such ailments as acute tonsillitis, acute bronchitis, bronchial asthma, intestinal stasis and other intestinal infections now find the means at hand in Alcresta Tablets of Ipecac.

LARYNGISMUS STRIDULUS

By L. D. Brose, M. D., Ph. D., F. A. C. S., Evansville, Ind.

By Laryngismus Stridulus we understand an attack of spasmodic closure of the glottis, the result of either reflex or direct irritation of the recurrent laryngeal nerve. The cause may lie central, peripheral or within the larynx. It occurs as a purely functional derangement in hysteria and neurasthenia. Characteristic of these functional attacks is their tendency to supplant convulsions or spasms in other parts of the body. Other diseases in which laryngo spasm may occur are epilepsy, chorea, hydrophobia and tetanus. I have met with it in a patient who had carcinoma of the esophageal end of the stomach. Aneurism of the aorta, great cardiac enlargement tumors both within and without larynx, enlarged bronchial glands and disease at the apex of the right lung involving the recurrent laryngeal nerve, may cause laryngospasm. In a reflex way intra nasal disease, enlarged lingual tonsil, adenoid and accumulations in the alimentary tract may give rise to spasm of the glottis. Laryngospasm, other than that occasioned trough intralaryngeal manipulation is rare in the adult and because of this, I will report the following case.

Mrs.H. D. M., married and some 45 years of age, was first seen by me November 16, 1917, in the Walker Hospital She stated that coming on as a rule after midnight and after some hours of sleep she awakens in great distress and with a feeling of asphyxia, lasting it seemed to her an eternity. Her nurse, however, said the attacks were but one or two minutes duration but their onset so sudden there was but little time to do much for her relief. It was pitiful to witness an attack and the intense distress of the patient. As a rule, the spasmodic seizure passed off by a long drawn whistling inspiration followed by the eructation of much gas from the stomach. Associated with the inability to breathe, the hands and fingers are clinched, the neck muscles stiffened and there was lividity of the face. She had been treated some ten days prior to my seeing her by another physician but without improvement. For some years she had been an habitual user of medicine to move the bowels and during the past 18 months she had lost some 50 pounds in weight, largely the result of domestic trouble since she has had no other illness. The duration of an attack of laryngospasm is always short,

else the person succumbs to asphyxia. or inspiration; during expiration the laryngoscopic examination is out of the question. The attacks may repeat themselves many times in twenty-four hours or recur only at long intervals. Fatal termination is only likely when there is a foreign body in the larynx or with impaction of a growth between the vocal cords. Between the age of fourth month and the second year in childhood laryngospasm is much oftener met with, with a preponderance of the cases in the male, just the reverse being true in adults, where the female is oftenest attacked. In the adult the season of the year has little or no influence in determining the attack. In the child, however, midwinter is the season when by far greater number of cases are met with. Of all the underlying causes for laryngospasm in the child, nutritional disturbances hold first place, especially those of a rachitic nature. At one time it was believed the thymus gland was largely accountable for the disorder. This, however, has been disproved through pathological investigation. Hydrocephalus and microcephalie are among the central causes given. A number of theories have been propounded as to why rachitis bears so strong an aetiological relation; one being that because of the craniotabes when the child is lying down direct pressure on the brain occurs. It is not clear, however, just why the pneumogastric nerve alone of the cranial nerves should show the effects of such pressure and why in other cases of marked craniotabes laryngospasm is never manifested, Monti believes that the rachitic nutritional disturbance is responsible for exaggerated irritability of the child's nervous system as evidenced through disturbed sleep and cerebral excitement. Others again look upon laryngospasm largely as a reflex disturbance, probably due to toxins, with its origin in the respiratory and vasomotor centers. The typical course of the disease in the child may be stated as suddenly arrested respiration, lasting for a few seconds to perhaps half a minute and ending abruptly with deep whistling or a number of rapid inspirations, after which normal respiratory rhythm is restored. During the attack the child assumes a rigid posture, head thrown back, neck arched forward, eyes fixed, pupils contracted, face especially the lips cyanotic, nostrils dilated and the forehead covered with cold perspiration. In mild attacks there may be only a momentary and very superficial arrest of breathing. In the severe attacks you find the spasmodic seizure extends to the flexors of the fingers, hands extremities as well as to the diaphragm and other expiratory muscles.

Differentiation: Laryngospasm should not be confused with paralysis of the posterior crico-thyroid muscles, laryngeal vertigo, laryngeal crises of locomotor ataxia, spasmodic croup, and disturbances arising through impaired coordination in the laryngeal muscles. In posterior cricothroid paralysis the respiratory difficulty is constant and aggravated by the least physical exertion. Speech is retained and laryngoscopic examination shows the positon ot the vocal cords in the median line and immovable upon attempted inspiration. Laryngeal vertigo occurs in the midst of perfect health and without warning. The patient may awaken in the night with slight cough and perhaps a tickling sensation in the throat and then becomes unconscious for a few seconds; the breathing stops and the face grows cyanotic. The cases reported are mostly in men beyond middle life and who have been addicted to alcohol or suffered with gout, disabetes or cardiac disease. When the attack is over he does not feel unwell and is able usually to continue at what he was doing at the time of attack. Laryngeal crises consists of convulsive attacks in the tabetic, of coughing and dyspnoea, due to tonic spasm of the adductor muscles, the result of stimulation of the bulbar center. In addition to the laryngeal muscles all other respiratory muscles are involved. The attacks which occur with variable frequency are usually preceded by a tickling or burning in the throat followed by a choking spell with long drawn crowing inspiration and short puffy expiration and a boisterous cough much like that of whooping cough. The attack seldom lasts over one or two minutes when the respiration becomes gradually restored along with maybe a little mucous expectoration. Spasmodic croup occurs in the night. After some hours of quiet sleep the child awakens with croupy cough and difficult breathing lasting one or two hours when it again goes to sleep and awakens in the morning maybe a little hoarse but otherwise seemingly well. Such attacks recur nightly with increasing severity, but by the end of five or six days the child is again well on the road to recovery. Coordination disturbances are the result of faulty innervation of the different laryngeal muscles so that when speech or inspiration is attempted

inharmonious actions occur. In phonetic spasm of the glottis the cords are adducted, pressed together so closely that voice production is impossible or at least very incomplete and difficult. Phonetic spasm differs from laryngospasm in that it does not happen if the patient leaves off attempting to talk. In spastic aphonia the cortical center for phonation apparently is thrown into spastic contraction so that voice production is impossible. Each attempt at talking aggravates the trouble. If he leaves off talking or whispering respiration remains unhindered. Inspiratory spasm of the glottis is due to perverse action of the cords. Upon attempted inspiration dyspnoea with at times cyanosis occurs. During phonation and expiration the cord movements are normal. Spasmodic inspiratory spasm disapears during sleep. Laryngoscopic examination reveals nothing abnormal other than the extreme approximation of the cords and maybe the false cords during attempted phonation spasmodic closure of the glottis disappears. In laryngospasm, as we have shown, the attacks are spontaneous and paroxysmal and not connected with cough, fever or speech disturbance.

Prognosis in laryngospasm is favorable as a rule although it may run a course of weeks or months ere the spasmodic attacks wholly disappear. Death from asphyxia seldom occurs. Effusion into the ventricles and subarachmoid space may occur and bring about fatal termination in the child.

In the case reported it was not until December 1st that she was dismissed from treatment cured. I looked upon her trouble as connected with neurasthenia, following nutritional disturbance as evidenced by her great loss in weight.

Treatment: Inhalations of chloroform with tincture of benzoin during the spasmodic seizure are not feasible because of the inability to take air in the lungs. A better plan is to instruct the nurse to rapidly introduce the finger into the throat back of the epiglottis and pull the base of the tongue and larynx forward much as is practised in attempted recussitation from ether narcosis: one may also try irritating the cornea and nasal passages hoping through reflex irritation to obtain relaxation of the laryngeal-spasm. Where an obstructing adenoid is found or the uvula is so elongated as to become a source of irritation to the throat or the laryngeal tonsil is enlarged or broad varices are found at the base of the tongue measures for their removal are to be recommended. When intransal reflex is established as proven by transient relief following upon the local use of cocaine to the nasal mucous membrane cautery of same may be practiced with trichloracetic acid. For the hysterical patient hypnosis and electrical treatment are to be thought of. I have found Blauds ferruginous pills with asafetida a valuable remedy. In the child afflicted with rachitis, cod liver oil, phosporus and lime salts are indicated. Personal hygienic measures should not be neglected. Our curative treatment should always so far as possible be based upon the underlying cause.

Hernia of the Urinary Bladder; Notes of Cases, with Remarks on Strangulation of Femoral Herniaè and Its Treatment—Blakeway (London Lancet) says that hernial protrusion of the urinary bladder is a comparatively uncommon complication of inguinal and femoral herniae. Diagnosis cannot usually be made before operation, though symptoms and statements of the patient may suggest it.

This difficulty of diagnosis and its rarity have led in many cases to injury to the bladder during operations for relief of hernia.

The author has operated upon five cases of hernia in which the bladder protruded. Three were males and two females. The ages varied between forty-eight and seventy-one years. All were on the right side, of the direct inguinal variety in two of the males, and of the femoral type in the other three cases. A sixth case was seen in which diagnosis was made without operation.

In all the cases operated upon, the relative position of the sac and the herniated process of the bladder were similar. The bladder protrusion in all cases involved the whole thickness of the bladder wall. It was closely applied to the inner side of the neck of the sac, and in each case was about the size of a walnut. At operation it was always found collapsed and might easily have been accidentally wounded or ligated.

Any thickening about the inner side of the sac of an inguinal or femoral hernia, especially if of long standing, should excite suspicion.

Gastralgic Attacks—Two teaspoonfuls of Seng shortly after eating, have been found exceedingly effective for preventing gastralgic attacks. The beneficial influence of Seng on the gastric glands is shown by an increase in gastric tone and a markedly lessened nervous irritability.

APPENDICITIS COMPLICATING PREGNANCY.

By Aime Paul Heineck, M. D., Chicago, Ill.

A review of the French, English and German literature on the subject of appendicitis complicating pregnancy, supplemented by my personel clinical experience, justifies the following conclusions:

1. Appendicitis occurs at all ages and in both sexes. Its frequency is underestimated and its significance not fully appreciated. It presents to all medical men important diagnostic, prognostic and therapeutic features.

2. Appendicitis, acute or chronic, initial, relapsing or recurrent, primary or secondary, complicates pregnancy with greater frequency than is believed. It is often overlooked, misdiagnosed and therefore improperly treated. It is the most important complication of pregnancy.

3. It occurs in single and twin gestations; in first, early and late pregnancies; in primiparae, and multiparae.

4. It ocurs at all periods of the childbearing age and at all periods of gestation. It complicates both intra- and extra-uterine pregnancies and can coexist with other diseases proceses to which it may be primary, secondary or co-incidental.

5. Gestation exerts no untoward influence upon the normal apendix. It can and frequently does aggravate existing, or determine new inflammatory disturbances in appendices deviating from the normal in form, length, mobility, location, etc., in appendices, the seat of inflammatory or other degenerative changes or bound down by adhesions, or containing foreign bodies. Pregnancy does not relieve the dangers of appendicitis, but aggravates them.

6. Appendicitis and uni or bilateral tubal pregnancy are frequently mistaken for each other. They may occur simultaneously or consecutively, may be either primary or secondary to, or independent of each other. Appendicitis may hasten tubal abortion through local infection, through general intoxication, may lead to suppuration of hematoceles of fetal cysts.

7. In appendicitis, in ectopic pregnancy and in combined appendicitis and ectopic pregnancy, of obscure symptomatology, it matters not whether you are certain or in doubt as to the real diagnosis early and timely operative treatment is imperatively indicated. Some cases of appendicitis in which extra-uterine pregnancy was thought to co-exist proved to be cases of appendicitis complicating uterine pregnancy.

8. During gestation, every type of appendicitis may occur; adhesive, catarrhal, gangrenous, ulcerative, obliterative, perforative and suppurative. Pus may be present within the cavity of the appendix, in its walls or around it. An appendiceal or peri-appendiceal abscess may rupture spontaneously into the uterus, vagina, rectum, through the abdominal wall and into the peritoneal cavity.

9. Appendicitis with adhesion formation is of great significance because adhesions of inflammatory origin can: (a) incarcerate the pregnant uterus in the pelvis and mechanically hinder the enlargement of the uterus; (b) entail subinvolution; (e) induce sterility; (f) disturb tubal and ovarian integrity of function and of structure; (g) determine ileus; (h) produce abortion, and; (i) lead to extra-uterine pregnancy.

10. Infection can and does spread from the appendix to the genital organs by way: 1. of the peritoneum (localized or diffuse peritonitis); 2. of the appendiculo-ovarian ligament; 3. of adhesions existing between the uterus and a perityphlitic pus focus; 4. of the Fallopian tube.

11. Simuletneous, consecutive, coincidental, inflammatory, or other degenerative processes of the uterus, tubes, or other pelvic organs may co-exist with appendicitis. The close anatomical relations existing between the appendix and the pelvic organs explain their frequent association in disease processes. It is easy to understand how inflammation can migrate from the appendix to the Fallopian tube, to the pregnant uterus, etc.

12. Appendicitis, either operated or non-operated, has a greater morbidity and a higher mortality in the pregnant than in the non-pregnant.

13. Appendicitis may or may not terminate pregnancy. The prognosis is good as to non-interruption of pregnancy: 1. when the appendix does not hang in the small pelvis; 2. when the inflammation is limited to the appendiceal mucosa; 3. when it does not extend beyond the appendiceal wall; 4. when the appendiceal abscess or peri-appendiceal abscess is small.

14. Pregnancy is a serious complication of appendicitis: 1. when the appendix is adherent to the uterus; 2. when it is the seat of an inflammation perforative, gangrenous or suppurative in type; 3. when

its inflammation leads to abscess formation, near or distal; 4. when the uterus forms part of the wall of an appendicular, peri- or para-appendicular abscess. In the aforementioned conditions, adhesions may be torn, abscesses may be ruptured by the enlarging uterus.

15. The symptomatology of appendicitis in the pregnant is the same as in the non-pregnant. The clinical picture however, is blurred by the co-existing symptoms of pregnancy. Mistakes are less likely to occur by keeping in mind that: (a) Every pregnant woman is to be examined for physical defects. (b) The history is all important; ask about previous attacks. In cases of relapsing appendicitis in young women, the attacks frequently occur just before or at the menstrual period. (c) In gravid women, all attacks of indigestion associated with vomiting and fever should arouse suspicion and command a careful examination of the abdomen. (d) Right-sided iliac pain unassociated with uterine contractions should lead one to think of appendicitis. (e) Deep seated retro-coecal and other abscesses may be detected by rectal examination. (f) Peri- and para-typhlitic abscesses may be detected by vaginal examination. Pregnancy increases the severity and the mortality of appendicitis.

16. The morbidity and mortality of appendicitis complicating pregnancy and the puerperium are the morbidity and mortality of delay in applying efficient surgical treatment. The initial symptoms of the attack do not enable the clinician to foretell accurately how a given case will terminate. What is going to happen in ten, twenty or forty hours following the onset of appendicitis cannot be foreseen. When the condition is diagnosed and remedied early, the mortality is practically nil. Abscess formation may be forestalled by early diagnosis and early operation. The high mortality is due to late diagnosis and late operation. The pregnant woman whose metabolism is good is a good subject for operative measures.

17. The type and the acuity of the inflammation influence the prognosis. The prognosis is good if the changes in the appendix are slight, if the inflammation is limited to the appendiceal wall, if there be slight or no peritoneal involvement, if complications be absent. It is grave in gangrenous, perforative and suppurative appendicitis and in all cases complicated by abscess formation near or distal, or by diffuse peritonitis.

18. Prognosis is better for the mother if there be no interruption of pregnancy, spontaneous or otherwise. The bad attacks cause abortions and abortion aggravates the illness. In the great majority of surgically treated cases, there is no interruption of pregnancy and when it does occur it is not due directly to the operation. The interruption of pregnancy is not indicated. It aggravates the prognosis.

19. The results for the mother and fetus are better, the less advanced the gestation, the less virulent and wide-spread the inflammation, the earlier the operation.

20. As far as the child is concerned, prognosis is absolutely good in cases of early operated appendicitis. Severe maternal appendicitis is exceptionally grave for the fetus, who succumbs either through infection or through interruption of pregnancy.

21. The following prophylactic measures are sound and safe and are recommended for general adoption: (a) During the child-bearing age, recurrent attacks of pelvic pain, dysmenorrhea, menstrual and other pelvic disturbances unassociated with objective pelvic findings are not infrequently due to unrecognized appendicitis or sequelae thereof. In the presence of this etiological factor, the ablation of the appendix is indicated. (b) In laparotomies for conditions other than appendicitis, the appendix should be examined. Should it present any deviation from the normal, its removal is indicated. (c) Durinf the child-bearing age, any woman who has one or more attacks of appendicitis treated non-operatively should have her appendix removed so as to correct existing pathological conditions and prevent future attacks of appendicitis and complications thereto. True prophylaxis in a woman of child-bearing age who has one or more well marked attacks of appendicitis is an interval operation. It goes without saying that constipation is to be avoided and that other hygienic precautions are to be observed. A definite and accurate diagnosis of acute, chronic or recurrent appendicitis invariably calls for operation, irrespective of the stage of pregnancy; The disease during pregnancy runs such a rapid course that delay is hazardous. Operation should be early and immediate. A case may be rendered hopeless by hesitation and inaction. Temporizing methods are extremely dangerous.

22. Treat appendicitis in the pregnant female as you treat it in the non-preg-

nant. Every pregnant woman who is a subject of appendicitis should be operated on just as soon as the diagnosis is made, whether the attack is the first, second or third.

22. The unusual risks of leaving a diseased appendix in the abdominal cavity are much increased by the pregnant state and the evil consequences of another attack, i. e., gangrene or perforation, will be correspondingly greater. The danger of recurrence in the later months of pregnancy and in the childbed calls for operation, preferably during the attack. If the patient is not seen in time, one will do the next best thing, an interval operation during the pregnancy. Pregnancy is an additional indication for operation cases of appendicitis.

23. In inflammatory disease of the appendix, the ideal operation is appendectomy. In some cases, however, one has to be content with incision, evacuation and drainage of an appendiceal abscess. Exceptionally, drainage of abscess in Douglas' pouch may be affected through the vagina or rectum. Pus should be evacuated, irrespective of uterine contents and irrespective of its location.

24. It is well to keep in mind that for an appendectomy the median incision is contra-indicated in the later months of pregnancy, that is the best to avoid or to reduce to a minimum, the manipulations of the uterus; opiates are indictated in the after treatment. Labor when it occurs shortly after a laparotomy is not to be unduly prolonged; it may have to be assisted. When operating on a pregnant woman for appendicitis every effort should be put forth to prevent miscarriage. Interruption of pregnancy is not indicated as it is an additional danger.

25. In all laparotomies for conditions other than appendicitis, if the patient's condition permits, the appendix should be examined and removed; 1. If it be abnormal in length, size or location. 2. If its cavity be partly or wholly obliterated. 3. If it be in close relation to a pedicle or denuded surface, left by operation. 4 If it be the seat of anatomic alterations, club-shaped, thickened, kinked, twisted, strictured, etc. 5. If it contains foreign bodies, fecal concretions, worms, etc. 6. If it be adherent, in part or in its entirety, to some normal or diseased contiguous organ or to the abdominal parietes. 7. If it be the sole content or one of the contents of a hernial sac. 8. If it be the seat of cystic, neoplastic or inflammatory disease.

26. When in doubt as to whether the case is one of appendicitis, salpingitis, tubal pregnancy or other pathological conditions, use a supra-pubic median incision. This incision affords easy access to most of the pelvic contents and though it is not the incision of election for exposure of the appendix, it is a very serviceable incision.

Advantages of Total Abdominal Hysterectomy, Especially in Pelvic Suppurations.—Rochard (Bull. Acad. de Med.), states that for a considerable time subtotal hysterectomy has replaced total hysterectomy. He believes this practice wrong and favors the total operation. It does not deserve the objections that have been made against it; and a cervix left in situ often becomes the site of epithelioma. In severe cases of pelvic suppuration the total operation gives effective drainage.

Since 1908 the author has carried out the total operation, which he divides into two stages. A subtotal hysterectomy is first done, which is followed by the secondary removal of the uterine neck. This he calls "subtotal hysterectomy totalized."

The author shows that the dangers which some authors declare connected with the total operation, i. e., hemorrhage, injury to the ureters, shock, and infection, are easily avoidable. The difficulty of operation, which was its chief drawback, has been obviated by thus dividing it into two stages and it becomes easy and rapid.

His statistics from February, 1917, to February, 1918, comprise 122 laparotomies for salpingitis, ovarian cancer, etc.; 48 were subtotal and 22 total. All these, as well as 7 other recent total hysterectomies, have given only 1 death.

He practices total hysterectomy in two stages whenever the neck appears doubtful on palpation, whether the process is uterine or adnexial; also in double pelvic suppuration whenever the lower pelvis is involved.

Health of Brazil.—The famous saying "Brazil is a vast hospital" is in a fair way of being outlawed. Yellow fever is stamped out and the government has made an immense appropriation for supplying prophylactic quinine to the entire community. To these achievements must be added the labors of the Oswaldo Cruz Institute in the realms of scientific prophylaxis of communicable diseases of all kinds.—Brazil-Medico.

PLASTIC SURGERY IN WAR AND PEACE.

By Carl Beck, M. D Chicago, Ill.

To construct parts of the body which nature has not formed, so called congenital defects or abnormities, or to reconstruct such portions which injuries or disease have destroyed, is the object of plastic surgery. It achieves this object by certain well defined operations and by a large number of operations which cannot be so well defined because no certain type is presented for plastic work. In peace times the number of defects of congenital nature prevail in number although industrial injuries, accidents, and disease furnish their quota. But in war times the injuries with their results are far inexcess. Consequently plastic surgery plays a much more important role in war and after war than in peace times.

Congenital defects, like harelip, cleft palate, are so typical that operative procedure for their cure can be devised with acute minuteness. Diseases already furnish less typifying material, still their results are more or less alike. For instance, saddle nose or destruction of nose or destruction of lips by carcinoma, webfingers by burns, contractures by burns, and so on, are examples of such injuries, for which also general rules can be given. But quite abnormal and almost undefinable are the conditions of deformities following war injuries. Nevertheless we try for the sake of practical use to define some principles according to which the surgeon can act when dealing with the results of such injuries.

One may state in general the following to be the leading principles: First: do everything immediately after the injury and in the immediate after-treatment of the same to prevent great deformity and loss of substance. This part of course is not in the hands of the plastic surgeon and if this indication has not been fulfilled but if there are great deformities and loss of substance, it is regrettable. Many things can be done in this direction during the after-treatment. Take for instance, an extensive injury on the arm or hand. The very fact that the arm is placed in such position that the muscles cannot retract, that the skin and underlying tissues cannot retract, is helping for a secondary operation of plastic nature. Second, never undertake any definite plastic work until the whole healing process is finished and a state of scar formation has been arrived at. It is a well known fact in plastic surgery that primary union is essential for success. Secondary union is only helpful sometimes to diminish results of injuries. But only primary union brings about perfect success. No primary union of a plastic operation is possible as long as healing processes are going on. It is therefore important that no radical reconstruction of tissues in the body should be undertaken until everything about the injury is healed. It will be therefore for a long time that the material coming out of this war will be subject to operative procedure. Many of the wounds of this war are suppurative wounds, which have either been infected during the injury or in the after-treatment and some of them will take months to heal, others heal and break open again. Reconstruction should not be attempted until a definite scar has formed. Otherwise flaps and transplants are useless.

In the third place plastic operations should be performed with a view of restoring function more than for cosmetic purposes. Here is a very important point. During peace times many operations are undertaken for cosmetic purposes and it must be said that it is rather discouraging when one considers the result of cosmetic surgery. The patients are hardly ever satisfied with the result; the surgeon rarely; the best shaped nose which has been gained by reconstruction falls short in its shape from the worst looking natural nose and it is only when the destruction has been such that a great unsightly scar and wound is resulting, that reconstruction should be undertaken for cosmetic reasons. Never undertake to correct slight deformities by big operations, it will be very disappointing. Scars are more visible than some slight deflections or depressions.

When it, however, becomes a matter of functional restoration (functional plastic) the shape is of less importance and we may state that the indications are broad for that kind of work.

As to the technique of plastic work during war and after war, it does not differ very much from the technique of peace times. The same methods of transplantation of tissues hold good but considering that we have to deal here mostly with young healthy individuals, it is evident that the results of plastic work on war injuries are far more satisfactory than those resulting from work on diseased individuals. What is most important is that surgeons should familiarize themselves with the difficulties and intricacies of this class of work before un-

dertaking it. They should serve an apprenticeship with some one who is a master in that work; otherwise, they will spoil a good many favorable cases in such manner that they will be irreparable, because in no other part can we afford to experiment less than in plastic work. In removal of a fibroid and in the removal of an appendix, a bungling job as far as the technique is concerned might yield as good a result as the finest technique in resection, but when a jaw is reconstructed and a bungling job has been done, it may never be possible to repair that jaw at all.

EDWIN SAMUEL GAILLARD, A. M., M. D., LL. D.

(Pioneer Surgeon of the Sunny Southland)

In Memoriam.

By William Lane Lowder, B. S., M. D., Tipton, Indiana.

O cherish'd Memory that dureth long!
O sacred Treasure! that shaded by the palms,
And brethed on by the angels' holy song,
Blooms on and on in Heaven's eternal calms.

'Tis, as if high winds in far-off heaven
Had noiseless shaken the celestial trees
And to our Mother Earth below had given
Some feather'd seeds from one of these.

Biographical Sketch.

"The feather whence the pen was shaped
That traced the lives of these good men
Noiseless, dropped from an angel's wing."
—Wordsworth.

Samuel Edwin Gaillard of Louisville, Jefferson county, Kentucky, was born in the city of Charleston, Charleston county, South Carolina, January 16th, 1827, and died in the former city, February 1, 1885.

Greeting.

I would unclasp a fiber of Life's pain
By giving glimpses to the soul beguiled
Of that fair land whose boundaries lie far down
In the wild world that colors all our dreams—

Far dwelling, fragrant, flowery and bedewed,
Beyond the ken of day; but whether yet
The heart will yearn with instinct unappeased
As yearns the child for its dead mother's breast
And with a faith that's stronger than all Sense,
Than Reason clearer, longer-liv'd than Will.

Lenvoy.

Despite the frigid clay that wraps this ephemeral life,
And all the poisoned passions that sore betray,
The Soul sends out frail gossamers of Hope
To catch the radiance of that Unknown Clime
And THRILL with the UNHEARD MUSIC of its shores.

Doctor E. S. Gaillard graduated in the arts from the "University of South Carolina" in December, 1845, and in medicine at the "Medical College of South Carolina" with the first honor, in March, 1854, settling the same year in Florida, where he practiced until March, 1857, when he removed to the city of New York, going the following August to Europe, and returning the following November. In March, 1861, he went from New York to Baltimore, and two months later he joined the Confederate army, at Richmond, Virginia.

He was appointed assistant surgeon of the First Maryland Regiment, in May, 1861; surgeon of the same regiment, and also brigade surgeon in August, 1861; medical inspector of the army of Virginia in September, 1861; medical director of one-half of the army in October, 1861; a member of the medical examining board of the army of Virginia, in December, 1861; medical director of the department of Aquia, in March, 1862; medical director of one-half of the army around Richmond, in May, 1862; losing his right arm in the battle of the "Seven Pines," May 29, 1862, but reporting for duty the following August; medical director of the Department of North Carolina and Virginia, being in charge of all the hospitals of these two States, in September, 1862, shortly after which he was invalided for three months; medical inspector of the Hospital Department of Virginia, in April, 1863; and in December, 1863, general inspector of the Confederate hospitals, serving in that capacity till the close of the war. In May, 1865, he took up his residence in Richmond, Va., whence in May, 1868, he removed to Louisville, Kentucky. He founded in January, 1866, the "Richmond Medical Journal," which he moved to Louisville, Kentucky,

in 1868, and published there under the name of 'Richmond and Louisville Medical Journal"; and established the "American Medical Weekly," in July, 1874. Doctor Gaillard was a vigorous writer, and one of the most noted medical journalists of the country, but on account of the loss of his right hand, he performed his professional and literary work under the greatest difficulty.

Honors Received.

In August and October, 1873, he received from the "University of North Carolina," the degrees of "Master of Arts" and "Doctor of Laws." In June, 1867, he was made Professor of General Pathological Anatomy in the "Medical College of Virginia," at Richmond; and in May, 1868, he was elected to the same chair in the "Kentucky School of Medicine" at Louisville, of which he became dean. In August, 1869, he was appointed Professor of the "Principles and Practice of Medicine and General Pathology" in the "Louisville Medical College," of which he was the first dean.

Doctor Gaillard was married in 1856, to Jane Marshall Thomas, daughter of the Rev. Edwin Thomas, of Charleston, S. C., who died in April, 1860, leaving no children; and, October 5th, 1865, to Mary Elizabeth Gibson, daughter of Professor C. B. Gibson, of Richmond, Va., and granddaughter of Professor William Gibson, of the "University of Pennsylvania." By this marriage four children survived him.

Valediction.

Years may come and go, and the great "Scroll of Time" may be rolled up and passed into the "Archives of Eternity," yet will Doctor Gaillard's memory, "sweet as the breath of violets by the brookside," "dear as remembered kisses after death," be held in the sacred heart of Love, and cherished, live forever. When our people shall nightly gather at their "firesides," when the laughter and prattle of the babe shall be a benison to the mother's heart, when rest shall come to relieve the cares that infest the day, and when heart-strings are strained to their utmost tension, his benign spirit shall come to cheer, bless and soothe. Doctor Gaillard was one of God's noblemen. He has mourned with us, he has tasted of our joys, and sorrows—he has been ONE OF US! The great family circle of friends (as it were) is broken, yet he has simply "gone before:"

"Age can not wither, nor custom stale
His infinite variety."—Swinbourne.

Nor can Father Time efface the memory of his unsullied character, his noble deeds, and cheerful soul. There is no "Night of Death," but indeed have the stars gone down on a brighter world than this, and yet there is a spirit in that Far-off Realm, beyond the "Tick of Time" whose nobility and splendor is only heightened by his temporal life here.

The Great Beyond: The Great Unknown.

He who hath found some fledg'd bird's nest,
At first sight may know if the bird be flown,
But in what fair field or grove, now he doth sing or rest,
That is to him, a mystery, unsolv'd and unknown.

Dear beauteous Death: JEWEL of the JUST!
Shining nowhere but in the DIM and DARK;
What mysteries doth lie beyond the dust,
Could MORTAL MAN o'erlook that MARK!

The Treatment of Keloid by Injections of Creosoted Oil.—Lesieur (Jour. de Med. de Paris), employs injections of creosote in sterile olive oil, 10 c. c. of the former in 150 c. c. of the latter, in the treatment of keloid. The puncture is made in the sound skin close to the growth and the oil injected beneath, but not into the keloidal tissue. From 2 drops to 5 c. c. are injected at each treatment, care being taken not to overdistend the tissues; the injections are made every two days or even every day according to circumstances. There is at first a diminution, later complete disappearance of the rosy or violaceous tint of the keloid; itching and pain if present cease with the first injection; the skin becomes supple and the growth finally flattens out and disappears. These results are obtained in from fifteen days to two months; in some instances, however, it may be necessary to continue the treatment for six months. The author has employed this method of treatment in 100 cases and regards it as very satisfactory.

Immunization of Gravidae Against Puerperal Fever—In Bumm's clinic, Berlin, gravidae are being actively immunized against puerperal fever by the use of a polyvalent vaccine obtained from streptocci present in virulent puerperal sepsis. The results are encouraging.—Correspondenz-Blatt fur Schweizer Aerzte.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

SECRETARY OF WAR'S ANNUAL REPORT GIVES INTERESTING FACTS RELATIVE TO U. S. ARMY MEDICAL DEPART MENT AND COMMENDS THE SAME.

The following extracts from the Annual Report of the Secretary of War will be of more than passing interest:

Health of the Army.

It must be a source of the deepest gratification to the country, as it is to me, that the health of the army has been so excellent, not only as compared with the army in other wars, but also as compared with the civil population. For the year ending August 30, 1918, the death rate from disease among the troops in the United States was 6.4 per thousand, in the American Expeditionary Forces it was 4.7; for the combined forces it was 5.9. The male civilian population death rate at the same ages was substantially the same as that of the American Expeditionary Forces. What this low figure means is shown by comparing it with the rate of 65 per thousand in the Union Army during the Civil War, and the rate of 26 per thousand during the Spanish War. Pneumonia, either primary or secondary to measles, caused 56 per cent. of all deaths among troops and 63 per cent. of the deaths from disease.

Venereal Disease.

During the year ending August 30, 1918, among the troops in the United States, the number of admissions to the sick report for venereal disease was 126 per thousand men, many of them were duplicates, and the far larger portion were contracted prior to admission to the army. In the troops in France, where there were no admissions from civil life, the record was immeasurably better than here at home, and conditions improved so rapidly that by September of the present year, the cases were reduced to the minimum of 1 per thousand! A showing unequaled in the records of any army of modern times.

Medical Organization.

Up to the end of July last more than 15 per cent. (Certainly more than 35 per cent. of the most active men in practice.—Editor.) On November 11, 1918, of the entire Medical Profession of the United States were on active duty as medical officers of the army. The responses of the nurses of America were no less splendid than that of the doctors. During the period of the war, more than $500,000,000 was made available for the uses of the Medical Department..

Figures as to the health of our soldiers bear eloquent tribute to the efficiency of the Medical Department of the army. With the invaluable assistance of the Red Cross, it found itself in a position to render very great service from the very beginning. It is significant to note that the first casualties of the war in the Medical Corps of the American Expeditionary Forces, when on September 4, 1917, 1 officer and 3 men were killed, and 3 officers and 6 men, were wounded in a German aeroplane attack on one of our base hospitals. On November 11, 1916, the army had 80 fully equipped hospitals in this country, with a capacity for 120,000 patients. In the American Expeditionary Forces there are 104 bas hospitals with 31 evacuation hospitals with an additional evacuation hospital in Siberia.

Army hospitals in the United States cared for 1,407,191 patients during the war; those of the American Expeditionary Forces cared for 755,354; a total of 2,162,545. Aside from this work, the War Department detailed for service with the British Army, 913 American officers, and 169 others for service with base hospitals we have turned over to the British. We have also had several ambulance sections operating with the Italian Army.

Inspection of Food.

The various foodstuffs issued to the millions of soldiers were carefully inspected and special schools for cooks and bakers were maintained.

Reconstruction Work.

One of the most important activities under the direction of the Medical Department has been the reconstruction work planned for soldiers, sailors, and marines. At ports of embarkation, arrangements have been made for the rapid classification of and assignment of returned sick and injured to the general hospitals selected for reconstruction work.

Such is the Secretary of War's estimate of the magnificent record of accomplishment scored by the American medical profession in the Great War for World Independence—a record all may be proud of, for in this great and supreme effort of our profession those who cared for the homefolks, alike did their duty by the Nation, as well as those who wore the khaki. North Carolina doctors had their full

share in this work, and the period just passing will go down in the history of the Carolina medical profession as one of its brightest in achievement, in self-sacrifice, in devotion to duty. More than ever we feel an honorable pride in membership in the most noble of professions.

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, 66TH ANNUAL MEETING AT PINEHURST, APRIL 15, 1918.

Dr. Cyrus Thompson, President, has sent the following letter to the Medical Profession of North Carolina:

Throughout the year the minds of us all have been so tensely tuned to thoughts of war, that it is all too likely that we have given little thought to the peaceful matter of necessary professional organization. But now victorious peace comes on apace. · We rejoice that the war is over, and we may fall again actively to our peaceful ways.

It is an opportune time, therefore, to remind the profession in all the counties in North Carolina, that the County Societies should hold intact, and energetically complete as integral units of the State Society, their local organization.

The strength and worth of the Medical Society of the State of North Carolina must be measured by the completeness and liveliness of the county organization.

We have been passing through difficult times. The humane spirit and patriotism of the profession depleted the active membership of the county societies and increased the burdens of those of us who have remained at home. We are proud of the spirit of our brethren and of their sacrifice and service in the camps and on the fields of battle. We must realize that their absence devolves upon us the burden of holding the profession together, both in the counties severally and the state as a whole, for the sake of both the whole profession and the people whom the profession seeks to serve.

Our nation has achieved marvelous success and literally covered itself with imperishable glory in this unparalleled tragedy of the world. Our profession has rendered man and civilization a necessary and indispensable service through it all.

When the medical men who went out from North Carolina on their humane mission return to their homes to take up with us their labors of peace again, let us present to them our State and County Societies in perfect working order.

This is our common obligation. May I not, therefore, appeal to you to see actively to it, that the December meetings are well attended, and that all eligible men in your county become and continue active members of your county society?

The only way to accomplish this is for every doctor in North Carolina to take upon himself the personal responsibility of doing his part in perfecting the county organization and paying his dues to the State Society now.

THE UNITED STATES THE WORLD'S HEADQUARTERS IN MEDICINE.

There was a time in the early days of the American colonies when the "mother country" systematically influenced against the development of institutions of higher educational character, and it was felt then that "the education of no gentleman was complete without a stay of more or less duration at some European college." And this dogma, for which there was originally a sound basis, applied with even more force to the education of the medical gentleman, and continued to be of application for a century or more following the establishing of American independence.

But the soil of America, so fruitful of genius along every helpful and productive line, grew great surgeons and erudite physicians. Notable were the surgical achievements of American pioneers; and as operators, bold, skilled and producing results, the times arrived some years since when it could be truthfully said the chirurgeons of the United States literally lead the world. The American dentist has for many years been regarded in European capitals as the superior of any, and for almost a half century, every monarch has maintained as a part of his official retinue, more or less closely attached, a dentist from our country.

While the brain of the American doctor was vieing with best on earth in activity, and the deft fingers of the surgeon guided by mind of equal capacity to the best, it is a noteworthy fact that the establishing of high grade American medical schools lagged for many years beyond the time when higher standards should have been secured.

Thanks to the potent influences of the medical societies of the states, and of the nation, within recent years, keeping full pace with general educational developments, medical education has progressed with leaps and bounds which have within the present generation literally placed American medical institutions in the very

front rank, and today none need go abroad for the highest and most complete instruction in any branch of medicine or surgery.

The growth of splendidly endowed schools with ample laboratories and hospitals, for the study of every possible medical problem, has grown apace, until today America can point with pardonable pride to her institutions for promoting the study of the medical sciences, and truthfully claim that in the matter of both equipment and endowment, our leading institutions are not equalled by any on earth. As a noteworthy instance may be cited the Rockefeller Institute in New York for the study of disease. Its equipment is the best that money may command; of its talented instructors, the same may be said; and no such institution with so large an endowment insuring its perpetuity, exists anywhere. The character of the work done is attested by noting within its walls painstaking careful investigators, men of middle life and even beyond and from every civilized nation of earth, patiently working out medical problems which engage the attention of the world at this time, making a spectacle that is truly inspiring to one fortunate enough to enjoy the contact.

Contributing undoubtedly to the more rapid appreciation by not only ourselves, but other nations as well of our remarkable development along medical instruction lines in America, the influence of the Great War will doubtless prove most helpful.

Among the really essential results following the war will be the sending to the discard the time-honored idea of European supremacy in scientific medicine; it being now agreed by the plain quiet-minded thinking men of the profession, that the superiority of instruction afforded by the medical schools of Mittel Europa was, like many of the other aft-admitted, rarely-challenged ideas that were in full fashion, after all very heavily laden with camouflage which the war has removed. As a matter of fact, without decrying for a single moment the very helpful and ever developing influence of foreign travel on the mind and manners of any gentleman possessed of reasonably average receptive faculties, it is very potent to the thousands of medical men in the army medical service who have recently essayed the task of mastering a moderate amount of foreign language, that one would hardly place in his own estimation as high a value on his possible acquirements of knowledge obtained in a semester or two or four, at a foreign university (during which time he was also, as most us were, struggling to acquire a sufficiency of the language to enable him to secure the comforts of life and the entertainments great foreign cities afford American students), as would a devoted and kindly clientele after their physician's return incline to place upon his acquirements in a foreign study of medicine.

The splendid post-graduate course enjoyed by the fully one-third of the really active practitioners of medicine and surgery in the United tates who have seen, and are seeing, service in the army and navy medical fields will have a wonderfully helpful effect in carrying forward a tremendous equalizing force for raising the higher levels of professional attained knowledge. Thousands of doctors who were beginning to lag in "keeping up with the times" in medicine, have been stimulated to renewed study of professional problems, and the war will inevitably tend to elevate standards of professional attainment very materially all over the nation.

The American College of Surgeons is another helpful factor in developing the best in surgical skill; and a future generation will point to that organization as having stamped itself decidedly on the best surgical thought of this generation in the United States.

Again as particularly noteworthy of the spirit of the times, and the recognition that it becomes now more than ever before, the duty of American medicine and surgery to evince willingness to let its light shine that the world may properly recognize the achievements, the opportunities, and the advantages accruing from the study of medicine in the schools of the United States, rather than in foreign hospitals, especially in those of Mittel Europa, was the recent action of the trustees of the American Medical Association in arranging for the publication of an edition of our great national medical weekly in Spanish, especially for circulation in Cuba and the countries to the south of us.

In every phase of the greater national life, looming large and portentious before us the American doctors of medicine will be found, as ever becoming the superior type of citizenship the men of our guild are, and doing their share of making greater the glory and achievement of the Nation.

MENTAL TESTS OF 1,500,000 AMERICAN SOLDIERS.

Shortly after war was declared committees of the American Psychological Association and the National Research Council in conjunction with U. S. Army surgeons undertook to provide a system of practical mental tests for application to soldiers and officers of the U. S. Army. The tests while of high scientific character were intensely practical and provided an immediate and reasonably dependable classification of the men according to general intelligence. Their specific purpose as announced early in the war, was to determine quickly the men of superior intelligence who could be considered from among the millions drafted as suited for the graver responsibilities of advance- as well as the early recognition and the assignment to development battalions of those of lower than average mentality.

Before the tests were ordered into general use they were carefully tried out in four of the larger army camps and revised on the basis of such findings after which they were generally applied to the troops on arrival at the training camps after being drafted. Three systems were used: No. 1, a group test for those able to read and write English; 2, a group test for illiterates; and 3, individual tests. In this way each class of possible draftees were reached and all classified according to mental capacity. The mental tests were not intended to replace other methods of judging a man's value in the army, nor was it assumed the results would inevitably determine the kind of a soldier one would make, nor serve as an accurate measure of his loyalty or bravery, power to command, or the emotional states that in the language of the service make a man "carry on." But the ratings secured from the testing out of the men at the start, were of immense value in selecting of men available for special training and placement in positions of higher than average responsibility and facilitated undoubtedly the rapid organizing of the most wonderful army any nation on earth ever placed in the field ready for action, and high grade service, in so short a time.

Lately some of the classified results from the first 1,500,000 examinations have been given out from the Surgeon General's office, and while we have heard much of the "unfitness" of American youth, we are glad to note that these findings less than one-half of one per cent. as being so deficient mentally as to warrant their recommendation for discharge, and it is also noted that of the men sent in by draft boards their general intelligence was such that less than two and one-half per cent. were unfit for general military service.

While every possible effort should be, and doubtless will be made by educators, psychologists and all others concerned with the training of our youth, it is encouraging to have such evidence as this of the general virility and stamina of the mentality of American young manhood.

PHYSICIANS AS DEFENDANTS IN THE COURTS.

During the past few months a number of practitioners of North Carolina, some of them doctors widely and favorably known, have been hailed into local courts for failing to report contagious and infectious diseases occurring in their practice. Naturally our sympathies are with the doctors, and yet it is distinctly to be borne in mind that we are living in a new era as compared with a generation ago, and that while at one time it was considered the correct thing for the physician to stand square four between his patient and all publicity as regards his or her diseases, we are now living in an age when all must give most careful consideration to the general welfare of the community at large, and patients afflicted with any disease likely to infect others, must have the lesson well impressed upon them and their medical advisers, that all such diseases are viewed now as social menaces and to be made matters of official report and properly segregated.

The sooner all physicians learn this lesson in modern sanitation and revised ethics, the less the doctor's worries, and the happier his patients will be also, for unquestionably in the past few years both patient and physician have at times been quite uncomfortable in realizing their suppression of publicity to the existence of a disease which society, and the statutes alike regarded as a source of possible community infection.

Local boards of health and health officers are determined to accomplish the purposes of their existence, public sentiment is aroused in the matter of disease prevention as it never was before, and both physicians and patients should be found cordially co-operating in promptly obeying all regulations.

DR. JOHN A. FERRALL A STUDENT OF THE NEW SCHOOL OF PUBLIC HEALTH AT JOHNS HOPKINS.

The many North Carolina friends of Dr. John A. Ferrall who was for several years a most valued employee of the N. C. State Board of Health have watched with more than passing interest his continued fine career in public health work since he left the state a few years since to assume new duties in a larger field in the New York offices of the International Health Commission where he had an active outlook over certain sanitary problems as affecting more than half of the globe. Dr. Ferrall is continued actively in the service of this greatest of all sanitary boards, and has been detailed since early autumn to carry on special studies in the newly created School of Public Health in Johns Hopkins University looking to a special degree. Fortunate Dr. Ferrall, and it may be truthfully said, fortunate Commission that has found a man capable of such extraordinary capacity as to render advisable the special development he is being subjected to.

With all of the practice that the general man has, the most fascinating to me is the work of obstetrics, and to my mind the one branch of medical science that requires special study and preparation. True any one with a very limited knowledge can take care of a perfectly normal case, but when the abnormal cases come, it is then that the ingenuity, foresight, judgment, commonsense and skill is required of the best trained specialist.

Being a general practitioner, I feel like I have a perfect right to say what should be demanded of every practitioner for this important work. It is not enough that he know how to conduct a normal case of labor to a safe termination but that he should be able to recognize the many dangerous and abnormal conditions that will arise and conduct them to a safe conclusion.

Gall-Stones.—While it is generally conceded that there is no medical treatment for cholelithiasis, it is a fact that a teaspoonful of Chionia three times a day, through its cholagogue effect and decongestive action on the biliary passages, will go far to prevent the conditions which are so largely responsible for attacks of gall-stone colic.

EDITORIAL NEWS ITEMS

Dr. James Phillips, formerly of Tarboro, N. C., but more recently of New York City, has located in Charlotte, N. C. He will practice general medicine. His office is in the Commercial building and he resides in Myers Park. Dr. Phillips is a well informed and competent physician and he will, no doubt, do well in Charlotte.

Northampton County, N. C., has been noted lately as having one of the best organized health departments in the state as was manifested by its accomplishments during the recent influenza epidemic. Dr. F. M. Register, the efficient health officer has, in the opinion of those who have investigated the work done by him, succeeded most admirably in accomplishing a great work at a time when human life was at stake.

Dr. J. T. Reives, for two years past the valued health officer of Greensboro, N. C., has tendered his resignation as such to take effect immediately. He will resume private practice in the city, and in doing so carries with him the appreciation of citizens who recognized his great ability and earnest efforts to advance the city's health interests.

Drs. R. H. Garren and G. M. Smith of Monroe, N. C., have been elected members of the County Board of Health of Union County. Dr. J. B. Nance has been elected County Superintendent of Health to succeed Dr. S. A. Stevens who has filled the office for several years.

Governor Davis of Virginia has recently appointed on the state board of medical ,examiners Dr. H. U. Stephenson from Toano, Dr. I. C. Harrison, from Danville, and Dr. R. C. Randolph of Boyce, Va. These appointments are to fill the vacancies caused by Dr. J. E. Warriner of Richmond, retired, Dr. R. S. Martin, Stuart, Va., who died some time ago and Dr. P. W. Boyd, of Winchester, resigned.

At the recent meeting of the Roanoke Academy of Medicine, Roanoke, Va., the following officers were elected for the ensueing year: Dr. W. B. Foster, President; Dr. J. H. Dunkley, Vice-President; Dr. A. Stone, Second Vice-President; Dr. E. P. Tompkins, Secretary, and Dr. T. D. Armistead, Treasurer.

Dr. Oscar Dowling, of New Orleans, has been recently elected Professor of Hygiene in the Tulane Medical School. Dr. Dowling for many years has been President of the Louisiana State Board of Health.

Dr. Joseph A. Elliot, formerly Associate Professor of Diseases of the Skin and of Syphilis in the University of Michigan, is to take charge of this department the Crowell Urological Clinic the first of January.

This addition to this well known Clinic will be very much appreciated by the medical profession of this section of North Carolina.

At the December meeting of the Cumberland County Medical Society, held at Fayetteville, N. C., the following officers were elected: Dr. M. L. Smoot, President; Dr. P. W. Olive, Vice-President; Dr. R. A. Allgood, Secretary, and Dr. D. G. MaKethan was elected delegate to the State Society meeting. We understand that this society has kept nicely intact during the war and has done good work.

Dr. Deering J. Roberts of Nashville, Tenn., has retired from the editorial management of The Southern Practitioner. The New York Medical Review of Reviews has incorporated The Southern Practitioner beginning from January, 1919, taking over the subscription list and advertising business of this magazine. Communications hereafter should be addressed to The New York Medical Review of Reviews, 206 Broadway, New York City, N. Y. Dr. Roberts and his publication has been of great value to the medical profession not only in the South but throughout the country. It is decidedly an unpleasant thought to hear of the older men of medical journals dropping out of service.

The Albemarle County Medical Society of Va., we understand had a very successful year. They have had regular meetings and have had twenty-one especially prepared papers on different subjects. On account of the war the membership has been reduced to forty-five.

At the last meeting the following officers were elected for 1919: Dr. E. M. MaGruder, President; Dr. H. S. Hodges, Vice-President, and Dr. F. C. McCue, Secretary and Treasurer, all of Charlottesville, Va.

The Warren County Medical Society of North Carolina at its December meeting elected the following officers for the year of 1919:

President—Dr. P. J. Mason, Warrenton, N. C.

Vice-President—Dr. T. J. Holt, Wise, N. C.

Secretary—Dr. C. H. Peete, Warrenton, N. C.

Buncombe County Medical Society.—The annual meeting of this society was held Tuesday night, December 17th, in Asheville, N. C., and the following officers were elected: President, C. D. W. Colby; Vice-President, J. M. Lynch; Secretary-Treasurer, J. W. Huston. The society has held its usual meetings during the war in spite of the fact that it has sent twenty-five members to the colors and now has representatives in France, Italy, England, Belgium and in the army and navy in this country. It still has a membership of 77 and holds the record for the largest county society in the state. Following the annual meeting and election of officers a delightful banquet was served at the Manor. Dr. C. D. W. Colby presided and the following speakers responded to toasts: J. M. Lynch, A. W. Calloway, McMichael, W. R. Griffin and Captain Scruggs, recently honorably discharged from the army after nearly 18 months' service in this country. He will resume practice in Asheville.

Guilford County Medical Society.—At the regular monthly meeting of the Guilford County Medical Society held in Greensboro January 2, 1919, the following officers were elected for the year 1919:

President, Dr. J. T. J. Battle, Greensboro; Vice-President, Dr. A. R. Wilson, Greensboro; Secretary-Treasurer, Dr. R. A. Schoonover, Greensboro, re-elected.

Delegates to the State Society meeting at Pinehurst April, 1919:

Dr. May S. Miles, Greensboro; Dr. W. M. Jones, Greensboro; Dr. H. W. McCain, High Point.

The Powhatan County, Va., Medical Society at its December meeting elected the following officers for 1919: Dr. E. L. Thompson, President, Fine Creek Mills, Va.; Dr. T. S. Hening, Jeffersonton, Va., Vice-President; Dr. J. E. Tilman, Rock Castle, Va., Secretary-Treasurer.

Seaboard Medical Association.—The annual meeting of the Seaboard Medical Association of Virginia and North Carolina, was held at Kinston, N. C., on December 4th, 1918.

Owing to an epidemic of influena in and around Kinston, the meeting was shortened to a one day's session, being morning, afternoon and evening meetings, which were held at the Hunter building.

The following officers were elected:

President—W. L. Harris, Norfolk, Va.

1st Vice-President—C. B. McNairy, Kinston, N. C.

2nd Vice President—A. M. Burfoot, Fentress, Va.

3rd Vice President—Paul H. Mitchell, Ahoskie, N. C.

4th Vice President—J. Gates Goode, Cheriton, Va.

Treasurer—Geo. A. Caton, New Bern, N. C.

Secretary—Porter Jones, Newport News, Va.

The next meeting to be held in Norfolk, Va., in December, 1919.

The twenty-first meeting of the Tri-State Medical Association of the Carolinas and Virginia will be held at Richmond, Va., February the 19th and 20th. It is believed that this will be one of the best meetings that we have had for many years. It will be the first meeting since hostilities closed and quite a number of our men in the service will be present and a most enjoyable and profitable time is expected.

Richmond is an ideal place for medical society meetings. It has many historical attractions and its hospitality is nationally known. The Jefferson Hotel, which is usually the headquarters for the meetings, is one of the most magnificent hotels in the south, and its pleasing environments and comforts are not surpassed anywhere. It was decided by the Executive Council several months ago that the transactions of the 1918 meeting, which was held in Charleston, S. C., would not be published but would be combined with the 1919 transactions. This was a wise course to pursue on account of the fact that many of the active members of the Association were in the service and the fact that their dues were cancelled, which reduced the income of the Association considerably. Information concerning the approaching meeting can be secured by addressing either Dr. Robt. S. Cathcart, President, Charleston, S. C., Dr. J. Allison Hodges, Richmond, Va., or the Secretary, Dr. Ralph E. Hughes, Laurens, S. C.

The Wilson County Medical Society, at its December meeting held in Wilson, N. C., elected the following officers for the ensueing year: Dr. J. L. Smith, President; Dr. I. W. Lamm, Vice-President; Dr. E. L. Strickland, Secretary-Treasurer.

We understand that this society has had a successful year. Met every month except November and that was on account of the prevalence of influenza. Two of its members, Dr. J. S. Harrison, Elm City, N. C., and Dr. T. H. Wilson, Lucamia, N. C., died from this disease.

The Richmond Academy of Medicine and Surgery at its December meeting elected the following officers for 1919: President, Dr. V. Harrison; Drs. S. N. Michaux, J. F. Bright, and W. H. Higgens, 1st, 2nd and 3rd Vice-Presidents; Dr. Mark W. Peyser, Secretary; Dr. E. H. Terrell, Assistant Secretary; Dr. Howard Urbach, Treasurer, and Dr. G. P. LaRoque, Librarian. Dr. M. W. Peyser, who was re-elected Secretary and Treasurer, has been serving acceptably and continuously for 25 years and was re-elected in December for another year. This is rather a remarkable history and a great honor, which was many, many times merited.

The Iredell-Alexandria County Medical Society at its December meeting elected the following officers for 1919: Dr. T. V. Goode, President; Dr. W. R. Griffin, Vice-President; Dr. B. F. Watkins, Secretary, and Delegate to State Society, Dr. John McCampbell.

Dr. J. W. Wallace of Concord, N. C., died January 9 at the Charlotte Sanatorium. Dr. Wallace practiced medicine in Concord since his graduation in 1907. He received his license to practice in this state in 1907 and he joined the State Medical Society in 1908.

Dr. Wallace belonged to several medical organizations and at one time he was president of the Cabarrus County Medical Society. He was the author of many valuable and instructive papers. He frequently took post-graduate studies in the larger hospitals and colleges. The doctor on several occasions attended the Mayo Clinics at Rochester, Minn.

Several years ago he established a hospital in Concord. He was the head of this institution until the time of his death.

In all the departments of his profes-

sional life he was a success. He was a skilled surgeon and a popular physician. Dr. Wallace was about 32 years old.

Dr. J. W. Squires of Charlotte, N. C., died in France December 16th from an attack of pneumonia. Dr. Squires entered the medical service of the United States army about eighteen months ago and received a commission of Captain. Prior to joining the Yale Hospital Unit that he subsequently belonged he received preliminary military training at Ft. Oglethorpe. Later he was sent to the Rockefeller Institute in New York for further study prior to sailing for France. The Yale Unit in which he belonged was attached to the Hospital Unit No. 39, one of the best hospitals of the kind in France. Prior to joining the army Dr. Squires was an associate of Dr. A. J. Crowell of this city. He was a graduate of the North Carolina Medical College, and a post-graduate of the Johns Hopkins and of the Rockefeller Institute. Before his departure for the army he had charge of the X-ray department of the Charlotte Sanatorium, which was one of the best equipped in this country. He did very intelligent work there and he was held in very high esteem by his associates and appreciated by his co-workers in this department of medicine all over this country. Dr. Squires was about thirty years old and what he accomplished during his short professional life was remarkable. He was successful in every way. Dr. Squires belonged to the Mecklenburg County Medical Society, the North Carolina Medical Society, the Tri-State Medical Society, the American Medical Association and several other National Medical Associations. He wrote a great many papers and they were always carefully and intelligently prepared and delivered in a most attractive style. Socially he was popular, and professionally, he was recognied as a brilliant young medical man.

Dr. Francis Marion Burkhalter, of Bay City, Ga., a graduate of the Atlanta, Ga. School of Medicine, 1909, died from pneumonia, in France, on October 8, aged 31 years. He was a Captain in the Medical Corps in the U. S. A.

Dr. Lawrence Edward Flannagan, Captain U. S. Army, died from pneumonia following influenza at his home in Charlottesville, Va., on November 6, aged 54 years. He was a graduate of the University of Virginia, Charlottesville, in 1884.

St. Mary's Hospital of Athens, Ga., has given a contract for a new building which is to be 42x82 feet, three stories and a basement. The cost of the building is to be $43,000.

The South Carolina Baptist Hospital at Columbia, S. C., is preparing to erect a hospital 8 stories, 104x208 the construction to consist of concrete, steel, brick and stone. We understand that when this building is complete, it will be one of the best and largest in this section of the country.

The Methodist Hospital of Memphis, Tenn., has let a contract for a new building, 200x120 feet. The building is to be re-enforced concrete and brick, mastic roofing, concrete floors, steam heat, two electric elevators. The cost of the building is to be $400,000.

Dr. C. J. Turvey, formerly of Charlotte, N. C., died in New Mexico on December 19th. He was 31 years old, and was a graduate of the North Carolina Medical College. Dr. Turvey was a first-class medical gentleman in every way, and his death is a distinct loss to the profession.

Dr. Stewart W. Pryor, of Chester, S. C., died December 27th from an attack of pneumonia following influenza. Dr. Pryor graduated from the Atlanta School of Medicine in 1887 and soon afterwards located in Chester, S. C., for the practice of medicine. For over thirty years he was one of the leading surgeons of South Carolina, or of this section of North Carolina. He was a hard worker, intelligent and skillful. About 15 or 20 years ago he established a hospital known as the Pryor Hospital in Chester, S. C. It was a large and handsome building and always full of patients. His place will be hard to fill. He was popular among his people and his patients appreciated and loved him.

Dr. Stephen J. Hawes, formerly of Dover, N. C., recently died in France after a brief illness from pneumonia. He was a graduate of the Medical College of Virginia, class of 1911. He joined the Medical Corps of the Army and was first stationed at Camp Jackson, Columbia, S. C. His rank was that of Lieutenant. Dr. Hawes was in France about a year. His death is a distinct loss to the medical profession.

Dr. E. O. Taylor of Greenville, S. C., died about the middle of October from an attack of pneumonia and influenza. Dr. Taylor was 32 years old and was a popular physician and had a large practice. He graduated from the University of Maryland in 1911.

Dr. Paul Morgan Strother of Lynchburg, Va., died November 26th from injuries received in an automobile accident. He lived less than a day after the accident. Dr. Strother was 34 years old and was born in Lynchburg, Va. He graduated from the Medical Department of the University of Virginia in 1906. He was a member of his State and County medical societies and took a high stand in both of these organizations. He was held in high esteem by his medical associates in Lynchburg, Va. He was popular socially as well as professionally.

Influenza Deaths in Camps.—The results of the influenza epidemic in army camps and military centers in the United States, made public by the war department on December 10, shows that there were 338,257 cases of the disease up to December 1, with approximately 17,000 deaths. From September 13, the date of the outbreak, to December 1, 19,694 deaths from all causes were reported by military stations in the United States; about 2,000 of these deaths were due to causes other than influenza and pneumonia.

To the 257 Journals listed in the American Medical Directory, pages 91 and 92.

The Annual Report of the Surgeon General, U. S. Army, for 1918, (including statistics for the calendar year 1917 and activities for the fiscal year ending June 30, 1918), has just been issued from the Government Printing Office. It contains a comparative study of the health of the army, 1820-1917; an account of the health of the mobilization camps and of the army by countries; a consideration (70 pages in extent) of the principal epidemics in the camps; and a discussion of fractures and operations. Nearly 200 pages are devoted to the special activities of the medical department: with the American Expeditionary Forces, and in the divisions of sanitation, hospitals, supplies, laboratories and infectious diseases, internal medicine, general surgery, orthopedics, head surgery, neurology and psychiatry, psychology, food and the Dental and Veterinary corps. In addition to the usual tables of illness, discharge for disability and death, there are given tables of battle wounds and operations; of complications of various diseases and of case mortality. The text is illustrated by 73 charts. Altogether the report is a study of health and morbidity in an army of over 1,500,000 men, for the most part yet in the period of training. It should be of interest to epidemiologists, vital statisticians and army medical men.

Influenza a World Plague.—According to a London writer it is reasonable to believe that throughout the world about 6,000,000 persons perished from influenza and pneumonia during the last three months. It is estimated that the war caused the death of 20,000,000 persons in four and a half years. Thus it may be seen that influenza has proved itself five times deadlier than the war. Never since the black death has such a plague swept over the earth. It is pointed out that this illustrates the need of a new survey of public health measures.

Medical Society Elections.—The American Association for the Study and Prevention of Infant Mortality, at its ninth annual meeting, held in Chicago, December 5 to 7, 1918, elected the following officers for the ensuing year: President, Dr. S. Josephine Baker, New York; President-Elect, Dr. Phillip Van Ingen, New York; First Vice-President, Dr. William Palmer Lucas, San Francisco; Second Vice-President, Dr. W. S. Rankin, Raleigh, N. C.; Secretary, Dr. Henry F. Helmholz, Evanston, Ill.; Treasurer, Mr. Austin McLanahan, Baltimore; Executive Secretary, Miss Gertrude B. Knipp, Baltimore. There were 17 States represented, also the District of Columbia and Canada.

A Drug Epidemic in London.—It has been stated that a drug epidemic of the worst nature has broken out in London within the past few weeks. The existence of an organization which might be termed a vice trust has been unearthed. It is said that women as well as men are victims of the drug crage and many soldiers have succumbed to the cocaine habit. The explanation of the serious and widespread nature of this epidemic of drug addiction is that the nervous tension produced by the stress and strain of war has sapped the vitality of the people and they have turned to drugs, sedatives, and stimulants largely because war conditions have closed other channels of distraction.

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Governor Bickett, in his address before the general assembly of North Carolina, recommended as a part of the general welfare scheme the following: A general law should be enacted making it compulsory for the owner of property on which a closet is located within three hundred feet of the dwelling house of any other person, to maintain a sanitary closet in accordance with plans and specifications approved by the state board of health. Such sanitary closets would prevent the spread of typhoid fever, hookworm, intestinal tuberculosis and other intestinal diseases. Besides, many diseases are brought on by the absence of commodious, sanitary and convenient toilet facilities. Especial attention should be given to toilets for use in schools and all places where people assemble in large numbers.

Medical Examinations Before Demobilization.—All troops from overseas are to be kept in observation camps for at least two weeks prior to embarkation, and suspects will be detained until all possibility of the development of infectious disease is over. The health of the troops as a whole is said to be excellent at the present time. Before demobilization every man will be subjected to a thorough medical examination, and careful statistical records kept of his condition. Those found with defects will be kept under medical attention until the defect has been removed or found to be incurable. By this means records will be available that will be usedful in the settlement of pension claims later on.

Major Wm. T. Carstorpher of Wake Forest College, medical department, is now in France in the Medical Corps of the U. S. Army. We understand, as we expected, that Dr. Carstorpher has made a great success in the Medical Corps of the army. In the fall of 1917, Dr. Carstorpher was called into active service. He had already volunteered in the Medical Reserve Corps. He received the commission of Lieutenant and soon afterwards he was advanced to the rank of Captain during his training, which he reecived at Camp Greenleaf. In November, 1917, he was ordered to take charge of the Field Hospital 347 where he remained until January, 1918, when he was appointed Chief Surgeon to a machine gun battalion; here he remained a while, completing the work required of him. Later he was ordered to headquarters as Medical Instructor and Inspector of the 87th Division. He remained at this post until he was made Sanitary Inspector of the 87th Division with the rank of Major. Last August he was appointed to the post of Sanitary Advisor at Camp William, where he is now stationed as a Sanitary Advisor to the 9th Army Corps.

In fulfilling these various duties at different places in this country and abroad has given Dr. Carstarpher a fine experience and a fine opportunity to observe things of value and profit. We feel sure that he has taken advantage of these opportunities to the fullest. It is expected that the Major will soon return to this country and that he will be on hand at our next North Carolina Medical Society meeting at Pinehurst, N. C., in April. We hope very soon to have the pleasure of publishing an interesting article of the Major's, giving his experiences and ideas of the medical side of military life in France.

Influenza.

What the epidemic has done for the people of Transylvania County, N. C., and what the health authorities have done for the people in preventing the spread of the disease.

We have a population in this county of 7,550. From a conservative estimate made from reports given me there has

been in our county 854 cases of influenza. It is fair to add to the above 854 cases thirty to twenty-five per cent., to account for cases not reported by our physicians and for cases that did not come under the care of physicians, say 250 cases, this makes a total of cases to December 18, 1918, of 1,104. Of these cases only nine deaths are reported.

This showing is greatly to the credit of the physicians and nurses of the county, in considering this point it has been claimed, that "We must have had the influenza in a much milder form than that which prevailed in other places." Not so the records of our physicians, temperature, physical findings, etc., will show that "the form" of the disease was as severe here as elsewhere.

If I may be allowed to and excused for referring to my own list of cases, will state that I had 135 cases, 44 of these cases had pneumonia, 28 of these pneumonia cases had pneumonia in both lungs, well developed and severe, temperature from 103 to 106 degrees.

The cost of the epidemic so far, to the people, will figure according to established rules:

Nine deaths, economic value of each life to the state, $1,700.00. Total, $15,300.00. Loss of time for each case averaged at ten days, $1.00 per day. Total, $11,040.00. Medical attention, medicines and nursing, minimum, $1.00 per day. Total, $11,040.00. Grand total $37,380.00.

The above does not include the loss to the public and the disturbance of business from the closure of public places, i. e., "Putting the lid on."

This does not include the loss of time required for convalescence, does not include many other expenses, and above all does not and cannot include the mental anguish and heart ache.

What the health authorities did and saved for the people. Remember that our vigilant health authorities, put the "lid" on good and tight, two days before other places in the state acted. Those two days at that time were vital, and prevented many cases of sickness, in a manner nipped the thing in the bud. All succeeding days of "lid on" prevented many more cases. Without the "lid" it is safe to say that there would have been a veritable conflagration, that at least by this time half of the people would have been stricken by this disease, in plain figures 3,775 cases with their proportionate number of deaths and expense. Make a calculation on this basis and the results will be too appalling to contemplate. For a very conservative estimate, putting it in minimum figures we will say that there would have been, without the successful efforts of the health authorities to prevent, twice as many cases as we have had, this would mean that the health authorities saved at least nine lives and $37,380.00 in cold cash for the county.

An important moral and lesson to be drawn from this, and one that the people should take to heart, is that the following is of vital importance to the people, namely, proper sanitation, the immediate reporting to the quarantine officer all contagious diseases, isolation of the sick, and proper quarantine, prompt and continuous co-operation with and obedience to the health authorities. It pays in sickness, lives and money saved.

C. W. HUNT,
County Health and Quarantine Officer,
Brevard, N. C.

Building Up After Long Illnesses.

During convalescence from a long illness a requisite is an agent that will improve the quality of the blood-stream and thus aid the ordinary recuperative powers of the run-down system.

Cod liver oil has proven its worth for this purpose, for which reason it is held in high esteem by the profession. The vital powers have been badly depleted during the protracted acuteness of the illness, and the need for a proven replenishing agent is urgent. At the time of making a choice of reconstructives, it must be borne in mind that one must be chosen of definite therapeutic power and which at the same time will not prove objectionable to the patient and become intolerable. If Cord. Ext. Ol. Morrhuae Comp. (Hagee) is the agent chosen, the physician may know that he is employing a preparation of worth and which, owing to its palatability, may be given freely and for long periods without causing the least distress.

As a means of building up the system after a long illness Cord. Ext. Ol. Morrhuae Comp. (Hagee) is of well proven merit and may be fully relied upon.

Bowel Inertia.—It is the tendency of Prunoids—not only to produce one or more movements following each dose, but to promote physiologic regularity of the bowels—that makes this remedy so much superior to "salts," or the laxative measures commonly employed. In simple words, the use of Prunoids means the rational treatment of bowel inertia—the activation of physiologic functions.

NEW HOME OF THE H. K. MULFORD COMPANY

Having outgrown their present Pharmaceutical Laboratories, the H. K. Mulford Company have purchased and will soon occupy the modern building, located at Broad, Wallace and Ffteenth streets, on Philadelphia's main thoroughfare, six blocks north from City Hall.

The building is of modern construction, being fireproof throughout, of steel, concrete and stone, nine stories in height and has a total floor space of nearly ten acres.

All equipment is of the latest type used in building construction and includes four electric passenger elevators, four electric freight elevators, with a capacity of twelve tons; four enclosed fire towers for the safety of the occupants; electric generating machine; mail shutes; artesian wells, etc., etc.

The structure will be further equipped with modern labor-saving devices and when occupied will house the general offices and the drug, chemical and pharmaceutical departments which are now distributed over a number of buildings in several locations.

This will be the largest building in the world devoted exclusively to the production of medicinal products. It will be a worthy peer of the Mulford Biological Laboratories, located at Glenolden, Pa., which are recognized as the largest and most complete in existence.

The rapidly increasing business at home and abroad has necessitated this expansion and the new premises will enable the H. K. Mulford Company to fulfill the long cherished aim of making the MULFORD STANDARD OF SERVICE equal to the MULFORD STANDARD OF QUALITY.

Radium Treatment of Neoplasms in the Mouth.—Lannois and Moutet (Lyon Medical) report the present condition of patients given radium treatment a year or more ago. One young man has nothing left of his tonsils and the enlarged glands in the neck and axillae have subdivided to normal size and shape. Recently some enlarged glands were palpated in the inguinal region. These do not seem to be metastases but a new manifestation of the lymphadenia to which he is subject. Two other patients are at work with no indication of recurrence. In a fourth case, a woman of 74 was treated for a lymphosarcoma of the left tonsil. The dose of radium applied was 912 milligram hours. Improvement was rapid, the tumor promptly subsided and in a month or two both tonsils had completely retrogressed. In another case the cancer of the tonsil was far advanced but the symptoms were notably improved by implanting the radium tube in a slit made with a bistoury in the tumified tonsil. The application was repeated later and swallowing became less difficult, but the enlarged glands in the neck were not modified.

BOOK NOTICES

Surgical Treatment. A Practical Treatise on the Therapy of Surgical Diseases for the use of Practitioners and Students of Surgery. By James Peter Warbasse, M. D., Formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate Desk Index Volume. Volume II contains 829 pages with 761 illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Per set (Three Volumes and the Index Volume): Cloth, $30.00 per set.

A few months ago it was a great deal of pleasure to the editor of this Journal to give the first volume of Dr. Warbasse's magnificent work a thorough review. The second volume of this treatise, that is now before us, is not quite as large as the first one, but it is in every respect the equal to the first. The 761 illustrations are very fine and of great interest and value. They are thoroughly appropriate and beautifully illustrate the text. Textbooks in surgery in these modern days of teaching, without elaborate illustrations are very defective and very incomplete. Dr. Warbasse has a happy way of appropriating his knowledge and material accumulated by himself to illustrate his ideas in operating. I take pleasure in recommending this very valuable work to surgeons and to physicians who do surgical work. Dr. Warbasse's reputation as a surgeon is a sufficient guarantee that this book is of great value.

Information for the Tuberculosis. By F. W. Wittich, M. D., Instructor in Medicine and Physician in charge of Tuberculosis Dispensary in the University in Minnesota Medical School, Visiting Physician to University Hospital, Minneapolis. C. W. Mosby Co., Publisher, St. Louis, Mo. Price $1.00.

This book answers the questions which frequently arise and which are constantly asked by hundreds of patients when first learning that they have tuberculosis and during the course of treatment. The author's vast experience in the field of tuberculosis, gained first when a patient of no light infection at Saranac Lake, and later as a physician and superintendent to some of the leading Sanatoriums for tuberculosis in the country, has enabled him to get very close to the patient and understand what is wanted in the way of information.

There is no doubt that this book is of great value to the tuberculosis patient, and it is also valuable to every practitioner who comes in contact with this class of patients.

Mental Diseases. A Handbook Dealing with Diagnosis and Classification. By Walter Vose Gulisk, M. D., Assistant Superintendent Western State Hospital, Fort Steilacoom, Wash. Illustrated. Published by C. V. Mosby Co., St. Louis, Mo. Price $2.00.

This book contains 142 pages. It is well and appropriately indexed. It makes a neat nice little volume. Dr. Gulisk has given the profession a good little book. His description of the various kinds of insanity and the clear way that he writes, has impressed the reviewer. The forms of mental diseases mentioned in the book follow modern usages. The first chapter gives the classification now accepted for use in the War Department and recommended for general adoption throughout the United States. For the scope that this book was intended, it is thoroughly worthy.

Johnson's Standard First Aid Manuel. Suggestions for prompt aid to the injured in accidents and emergencies. Edited by Frank B. Kilmer; Lecture in First Aid; Member St. John's Ambulance Association, the International Congress of Frst Aid and Life Saving, the American Public Health Association, the Royal Society of Arts, Etc. In Collaboration with Eminent Surgeons, First Aid Authorities and Specialists. Illustrated. Eighth Edition Revised. Published by Johnson & Johnson, New Brunswick, N. J.

In preparing this new and thoroughly revised edition, the author's aim is to make it worthy of its place as a standard authority on First Aid.

The author states that he has received the suggestions of able and eminent specialists, first aid teachers and first aid workers long experienced in railway, mining, police and ambulance service in this country and abroad. This Manuel now reflects the opinion of the whole field of first aid in a way that makes the uniformity of its methods and materials, in common rules, very practical in ordinary emergencies. It has many beautiful illustrations and they are practical and appropriate. This book contains 143 pages and makes a neat little book. Every one who pretends to do accidental surgical work ought to have it.

Clinical Medicine for Nurses. By Dr. Paul H. Ringer, A. B. Member of Staff of the Asheville Mission Hospital, Asheville, N. C., and of Biltmore Hospital, Biltmore, N. C. Illustrated. F. A. Davis Co., Philadelphia, Pa. Price $2.00.

The chapters presented in this book represent in part, lectures on medical diseases that Dr. Ringer has delivered at the Asheville Mission Hospital during the last several years. Dr. Ringer states that one of his objects for publishing these lectures is to place in concrete form and fairly detailed descriptions, of various diseases that nurses will be expected to observe and interpret, and also the forms and basis upon which a class room lesson can be assigned and quizzes held, the teacher amplifying as he sees fit.

He further says that it will be noted that the bacteriology and pathology of diseases, save in a very few instances, have been but sketchily traced. The main points dwelt upon have been symptoms and their meaning, complications and their detection, as far as the nurse is concerned. Physical signs have been wholly set aside. He says that he does not feel that any nurse's mind should be burdened with their description and significance.

The reviewer has taken a special interest in looking over this volume. Partly on account of the fine reputation that Dr. Ringer has as a writer, a teacher, a scholar and partly on account of the fact that he is a North Carolina medical gentleman.

"A Compound of Pharmacy," by F. E. Stewart, M. D., Ph. G., Phar. D., Charter member of the American Therapeutic Society, formerly professor of Materia Medica, Medico-Chirurgical College, Lecturer and Demonstrator on Materia Medica and Pharmacy, Jefferson Medical College, Medico Chirurgical College and Woman's Medical College of Philadelphia, Quiz-master in Chemistry and Theoretical Pharmacy, Philadelphia College of Pharmacy and Chairman of the section of Materia Medica and Pharmacy of the Medical Association, Associate Editor of the Therapeutic Gazette, Editor-in-Chief of Merck's Archives, etc. Based upon Prof. J. P. Remington's "Text Book of Pharmacy," the United States Pharmacopoeia nine and the National formulary four. Ninth Edition revised and enlarged by Heber W. Youngken, Ph. G., Ph. D., Professor of Botany and Pharmacognosy and Director of the Microscopical Laboratories in the Philadelphia College of Pharmacy, Professor of Biology, Ursinus College, Formerly Professor of Botany and Pharmacognosy and Quiz-master in Materia Medica, Medico-Chirurgical College. Price, $1.00. Published by P. Blakiston's Son Company, 1012 Walnut Street, Philadelphia, Pa.

The first edition of this compound was issued in 1886 as a companion to Remington's Practice of Pharmacy with the consent of the author of that valuable treatise. Being primarily intended for the use of pharmaceutical students attending colleges of pharmacy, the scope of this work is limited to the consideration of the products and preparations of the United States Pharmacopeia Nine and National Formulary Four while Remington's work covers the entire field of Pharmacy in a very comprehensive and instructive manner.

The object of the author of this compound is to present information concerning official products and preparations in such clear, condensed and concise form as to be of especial service to the student in memorizing it. The immediate end which the student has in view is to pass the examination before him in a creditable manner. His time is fully occupied by lectures, laboratory work and recitations while in college and in most cases by work in a drug store in addition. He has therefore but limited opportunity to read text-books. What he wants and what he needs is such a book as this compound with the all important facts synopsized.

We have looked over this compound with a great deal of interest. It reminded the reviewer of his student days. We remember well the value of a book of this kind to the student. We recommend this to students especially and frequently a book of this kind is valuable to the busy practitioner.

"The Psychology of Conviction," by Joseph Jastrow, author of "The Subconscious Fact and Fable in Psychology," etc. Price, $2.00.

Contents: The Feminine Mind, Belief and Credulity, The Case of Paladino, Militarism and Pacificism, Malicious Animal Magnetism, The Psychology of Indulgence, The Psychology of Conviction, Fact and Fable in Animal Psychology, The Democratic Suspicion of Education, The Will to Believe in the Supernatural and Antecedents of the Study of Character and Temperament. Thinking is an art,

the art of logic, and thinking is an expression of our total mental nature, which brings it under the domain of psychology. Psychology is concerned with explaining how we are inclined to think; logic undertakes to lay down the law of how we must think if we would thing correctly. The actual thinking that we do, whether false or true, strong or weak, original or common place, consistent or capricious, direct or rambling, is none the less thinking. The results are psychological specimens, however well or ill they stand the test of logic, they are all plants, whether weeds or flowers. In the standard patterns of thought, the process begins with premises and ends with conclusions, and requires some sort of bond to hold the two in argument. Formally that is the whole procedure, actually it is a little more than a bare skeleton, lacking all the features of the flesh and blood reality.

What makes it so is the distributions of our interests and the limitations of our mental nature. Primarily we are interested in conclusions, for they bear upon our conduct, our comfort and our emotional security. Thinking encounters as it is stimulated by the realty of facts and events, the complexity of experience. We live under a practical stress; thinking must satisfy needs. We are ever thrown back upon our composite psychology.

The tangible outcome of your taking thought is the reservoir of our convictions that supply the stream of action. The relation between thinking and doing is elastic as well as complex. Thinking may not decide, but merely incline, it gives rise to beliefs and attitudes, tendencies towards conclusions, more or less tempered, beset by reservations, qualifications, doubts, and counter inclinations. Particularly are we moved by our emotions, our hopes and desires, more practically by our interests, always by our varied relations to the content of our thought.

The subject of this volume is concerned with the interaction of our logical and our psychological nature. It attempts to deal with the psychology of our most complex logical products. It follows the "case" method as the only pragmatic procedure, the only one that does justice to the rich content of a concrete issue. In the course of the analysis principles emerge and are emphasized, as in a trial in court, the judge and jury, though concerned with evidence and argument, are guided by principles. The sweep is a wide one and includes "cases" from the past, survivals into the present, of outgrown beliefs which still linger in strange persistance, popular beliefs in concert with expert conclusion, and the varied range of controversy in which protagonists contend for opposite verdicts upon much the same though differently selected evid nce. Since many of the beliefs thus creditably sponsored must in the nature of things be more wrong than right, the analysis has to consider closely the psychology of fallacy and prejudice, the tendencies to wrong belief that make a strong appeal to our nature.

For like reason a comparative survey of the several belief processes in terms of their logical structure introduces the study of the series of "cases."

This book contains 387 pages and every page is full of valuable thoughts and information. We have no hesitancy whatever in recommending this book.

"A Lecture Course to Physicians on Natural Methods in Diagnosis and Treatment." Seventh Edition, over 1,400 pages, 450 illustrations, and 350 illustrative clinical cases. By George Starr White, M. D., F. S., S. Sc. London, Los Angeles, California.

The time spent by any one in a perusal of this book will be well invested. It is written by one who has a thorough knowledge of this subject and who presents it in a very clear and reasonable style with a minimum of technical terminology and detail. One who is apt to forget the importance of animal parasites as a cause of human disease. But after reading this book one cannot fail to be impressed with the almost universal presence of parasites and their marvelous adaptability in the struggle for existence. Considering the opportunities, it is a wonder that any of us escape the infections. There are excellent chapters on the protozoa including spirochetes, Leishmaniasis, trypanosomes, amebae, worms including flukes, tape worms, trichina, and arthorpods including the various parasitic and disease-bearing worms. The book is profusely illustrated with pen and ink sketches of all the parasites described. The author has endeavored to make this book useful not so much to expert parasitologists as to the practising physicians, health officers, teachers of hygiene and college students, and in this he has admirably succeeded. Here are some extracts from his lecture on the subject: "My general advice to every patient is to lean toward a vegetarian diet, vegetables, quires fruit, while a nervous individual renuts and fruits."

"As a rule an over-nourished person re-

quires vegetables."

"Do not wonder whether this or that will agree. Forget about that while eating. If in doubt, do not eat what you worry about."

"Do not wonder how many 'calories' this or that contains. It is a fool method of feeding a person to have them figure about 'calories.'"

"One hundred 'calories' with one person is not necessarily the same with another person."

"As a rule, nearly every one eats too much sugar and bread. Many cases of dyspepsia can be cured by prohibiting the use of bread. Although bread is known as the staff of life, it will often be the club."

"If you are grouchy and out of sorts, don't eat. Food to the angry man is a poison. Never be afraid to make a clown of yourself at the table. Jest and mirth at meal time are better than the best physicians prescriptions."

"Eat when in a happy mood. If the happy mood cannot be found, do not eat."

"There is also an interesting article on electric and magnetic foods, contributed several years ago by Dr. White to the Medical Standard. Many pages are devoted to the various ailments and to clinical cases."

The reviewer has looked over this book reasonably carefully. We must admit, however, that our first impression of the work was not very favorable, but after an extended examination, we have put a different valuation on the volume. A careful reviewer can justly and intelligently find fault with most any work no matter how well it is written. We find that this work is not an exception to that rule. It however, has many valuable points, brought out clearly and intelligently as any work that we have had the pleasure of reviewing for a long time. Its 450 illustrations are certainly very important, accurate and intelligently selected. I would advise the readers of this Journal to write to Dr. White, the author, to send them the accumulated literature that he has descriptive of this volume. It is a valuable book and it would be well enough for every physician to have one in his office.

Animal Parasites and Human Diseases by Asa C. Chandler, M. S., Ph. D., Instructor in Zoology, Oregon Agricultural College, Corvallis, Oregon. First Thousand. New York, John Wiley & Sons, Inc. London, Chapman & Hall, Limited.

It is the belief of the writer that one of the most pressing needs of the present time is the education of the people as a whole in the subjects of vital importance with which this book deals, and an increased interest in this field of scientific work. Scientists are the leaders of the world, and should constantly endeavor to keep a little ahead of the lay population who follow them. It is, however, important that the leaders should not only blaze the trail, but should make it sufficiently easy to find so that the followers may not fall too far behind. In the intense fascination of exploring the trail, and the eager impulse to press on to newer and ever newer fields, the scientist is in danger of forgetting the handicaps of his followers, and of leaving them hopelessly in the rear. Popular ignorance of many important facts of parasitology and preventive medicine, even facts which have been common basis of operation of scientists for many years, is deplorable. To a large extent, however, the scientists themselves are to blame, for in their enthusiasm for discovery they have forgotten to make it possible for the laity to reap the benefits of their investigations. There is even a tendency to belittle the efforts of those workers who devote their energies towards assisting the general public to keep in touch with scientific progress. A book or paper which collects the works of others, models it into a connected whole, and makes ready available what before was widely scattered and accessible only to a skilled "library-prowler" is stigmatized by the term "mere compilation." It is the firm belief of the writer that this is not only unjust but unwise.

No less mental and physical energy, if not perhaps even more, is necessary for efficient "mere compilation" than for the addition of new facts to scientific knowledge, and the value to civilization, which must be the ultimate criterion by which all scientific work is judged must be equally as great, if not greater. The value of connecting related facts is twofold: it helps keep the world in general some where nearly abreast of the times, and it is a distinct aid to further progress. Having the courage of his convictions along this line, the writer has spent much time, which he might otherwise have spent on original research in the complication and popularization of the subject matter of this book. No attempt has been made to give detailed descriptions of parasites, or to go further into their classification than seemed necessary to give a correct conception of them. Likewise discussions of correct scientific names and

synonymy have been entirely omitted since important and interesting they may be to a parasitologist, they are of no interest to the lay reader. An attempt has been made to use scientific names which are most generally accepted as correct, except that in cases of disagreement between American and European usage, the American name has been used. In cases where some other name than that adopted in this book has been or is still in common use, it is given in parenthesis to afford a clue to the literature associated with it. In the text-book, the author has purposely refrained from citing and from mentioning more than a few names of investigators. It obviously would be impossible to give references, or even mention more than a small per cent. of the thousands of contributors to the material here assembled without making the text cumbersome and unreadable, especially for the readers for whom the book was especially prepared.

Only a few of the leading figures in history of each group of parasites have been mentioned, other citations would have meant a more or less arbitrary selection of a few from among many, which must inevitably result in injustice. The illustrations, with two or three exceptions, have been drawn by the author either by specimens or from illustrations of other authors. Pen and ink drawings have been used consistently in the place of photographs since it is believed that such drawings, if carefully done, are far more valuable for scientific purposes than are photographs. The trained eye, by voluntary concentration on certain parts, and inattention to others. to see much more than can a camera, which has no such power of adiustment. A pen and ink drawing can, therefore, represent more accurately what can be seen by the eye than can a photograph.

This volume of 570 pages makes a very handsome book. Dr. Chandler merits our congratulations. While the book is intended to be read by intelligent lamantin, it is invaluable to the medical profession.

"The Effect of Diet on Endurance," by Irving Fisher, Professor of political economy in Yale University, Chairman of the Hygiene Reference Board of the Life Extension Institute. Yale University Press, New Haven. London: Humphrey Milford, Oxford University Press. Price, 60 cents.

A most remarkable and startling confirmation of Professor Fisher's theories of diet is now to be found in Mr. Hoover's recommendations and the widely accepted practice among the patriotic Americans today. The use of high protein has been a vicious habit among us spendthrift Americans, which are not only contrary to the patriotic needs of the hour, but as Professor Fisher demonstrates conclusively in this volume, also contrary to the laws of hygiene and sane living. The observance, therefore, of Professor Fisher's theories of diet becomes not only a patriotic duty but an ehtical duty to ourselves.

City of Chicago, Municipal Tuberculosis Sanitarium. Annual Report, 1917. Published August, 1918. William Hale Thompson, Mayor.

Personal Hygiene and Home Nursing, a Practical Text for Girls and Women for Home and School Use, by Louisa C. Lippitt, R. N., Assistant Professor of Correction Exercises, University of Wisconsin (In New-World Science Series, edited by Professor John W. Ritchie). Illustrated. Cloth. VII, 256 Pages. Price $1.28. Published by World Book Company, Yonkers-on-Hudson, New York.

The purpose of Miss Lippitt's textbook is to explain the means by which girls and women may attain health and happiness in the present and lay the foundations for sane and vigorous lives in after years. In clearest terms it lays down practical instructions for the conduct of their daily lives. Not only are the rules set out, but the reasons which underlie them are made clear. Didections are given for preventing the spread of infection from cases of communicable disease; and instructions are furnished for the care of oneself and one's family in cases of accident or sickness. The author has given adequate treatment to the ideas that she considers most helpful to lay-readers, but she has taken pains not to go too deeply into the scientific aspects of any subject. She has desired to keep the book rather brief and for this reason has introduced only those topics on which women and girls seem particularly to need instruction.

Chancroid of the Vagina.—Courtade reports two cases of this rather rare localization; this infrequency may be only apparent, for unless the speculum is used in routine work one can never be certain of their absence.—Annales des Maladies Veneriennes.

Miscellaneous.

Instructions as to Care and Skill Required.—In an action for malpractice against a hospital company and one of its physicians it appeared that in July, 1913, the hospital company agreed to provide for the plaintiff all necessary medical and surgical treatment, and all necessary medicines and hospital services during the period involved in the action; that in November, 1914, the plaintiff contracted a cold and needed medical treatment therefor; that the company assigned one of its physicians to the case; that the latter failed to use ordinary diligence, care and skill in treating the plaintiff, and that by reason of such failure the plaintiff's sickness progressed unfavorably, he became unable to work, was confined to his room, and continued to grow worse until he became afflicted with pulmonary tuberculosis, and that he was put to great expense in procuring subsequent treatment therefor. The plaintiff was awarded a verdict and judgment against the hospital and its physician for $2,500. The defendants appealed.

The principal contention of the appellants was that errors were committed in the court below in giving, refusing, and modifying instructions to the jury. Instruction 5 was to the effect that a physician is liable to damages if he fails to give "proper" advice to his patient. Instruction 10 reiterated this doctrine. Instruction 6 gave the jury to understand that a physician is guilty of malpractice, and liable to damages, if, in treating a patient, he fails to do anything necessary to obtain an approximately perfect result. The California Supreme Court said that the law does not require that the instructions and advice given by a physician to a patient should be at all events and beyond question "proper," or that his treatment should be certainly such as to obtain an approximately perfect result. It requires only, first, that he shall have the degree of learning and skill ordinarily possessed by physicians of good standing practising in that locality; and, second, that he shall exercise reasonable and ordinary care and diligence in treating the patient and in applying such learning and skill to the case. The law takes cognizance of human weakness and liability to err in the application of skill and learning, and it requires only the exercise of reasonable and ordinary care and diligence to avoid error. The instructions given required more; they required that the advice given should be 'proper," which implied that no error should be committed; they required that the physician should do everything necessary to be done to produce an approximate perfect result; that he guarantees that his treatment shall be of the best quality; whereas, the law only demands that he use reasonable care to attain such approximate perfection. Instruction 9 declared that the physician is bound to use, and of course to have, a degree of skill "adequate" to the performance of his undertaking; the law requires that he have the degree of skill ordinarily possessed by reputable physicians in that locality. This may or may not be "adequate" to the performance of his undertaking, according to the meaning to be given to the word "undertaking." If it was intended to mean that he undertakes a cure, or to produce a result approximating perfection, as stated in instruction 6, or that he undertakes to use the highest possible degree of skill, the standard was held to be higher than the law requires. The instruction was uncertain on that point, and it may have misled the jury.

The court below in other instructions stated the rule by which the defendants were bound accurately and clearly. There was a clear conflict in the instructions. The Supreme Court was unable to determine which set of rules the jury followed. The plaintiff's case, on the merits, was not strong. It could not be said that these instructions were not injurious to the defendants, and did not improperly control the deliberations of the jury in rendering a verdict. For these reasons the judgment for the plaintiff was reversed.—Hesler v. California Hosler Co., California Supreme Court, 174 Pac. 654.—Medical Record.

Report on the Essential Characteristics of Successful Aviators, With Special Reference to Temperament.—Rippon and Manuel, a medical officer stationed at an aerodome and a pilot of 600 hours' experience respectively, give the results of their first-hand observations as to the characteristics of a successful aviator. They have studied the life history of efficient pilots and have found that they possess the following characteristics: resolution, initiative, presence of mind, sense of humor, judgment; almost without exception they are keen sportsmen, of an alert, cheerful, optimistic happy-go-lucky disposition, full of animal spirits and vitality, and frequently lacking in imagina-

tion. Their favorite amusements are the theater, music (ragtime), cards and dancing, and the authors believe that a riotous evening once or twice a month is necessary for the average pilot. The fit pilot requires no stimulant and is fully aware of the danger of taking too much alcohol; he therefore rarely touches it. Older men with "nerves," however, take it freely, and the authors state that it is beneficial in so far as it enables a man to sleep after an exciting day and promotes good fellowship in the mess. Marriage, because of the sense of responsibility and consequent fear of accident, is a disadvantage to the pupil under instruction and, in most cases, to all flying men. One of the most important characteristics in successful aviators is "hands"; the pilot with good hands senses unconsciously the various movements of the aeroplane and rectifies abnormal evolutions; he anticipates "bumps" and invariably is a graceful flyer. Good hands appear to be congenital and cannot be acquired. The authors have produced a mechanical contrivance for the purpose of demonstrating the difference between light and heavy handed pilots, with which they are experimenting. The fighting scout is usually the enthusiastic youngster, full of the joy of life, of average intelligence, keen on flying, and with little knowledge of his machine or engine, little imagination, no sense of responsibility, a keen sense of humor, "hands," and quickness of thought. The less he knows about the mechanism of his machine the better, as a realization of the strain put on the machine at times might cause him to lose his nerve. Rippon and Manuel suggest that every medical examination of a prospective aviator should be preceded by a few minutes' conversation to ascertain the temperament or make-up of the individual. A healthy mind is the first essential. The possession of a suitable temperament is the criterion of the individual's ability to fly, while the possession of a suitable physique is the indication whether he can fly to great heights and stand the strain of continuous flying. A suitable physique without the temeprament required means failure, whereas many men physically unfit have become successful aviators. The following physical disabilities have been noted in temperamentally unfit pupils; stammering, minor defects of vision, adenoids or nasal obstruction, poor peripheral circulation, loss of tone (soft and flabby muscles, moist and cold hands, pale complexion, stomach splash, etc.); the authors, however, do not suggest that any one of these defects necessarily disqualifies a pilot. Lieutenant Manuel adds a note on the strain of flying, especially in cross country flying and at the front. He points out that inability to stand heights is often due as much to psychological causes as insufficient oxygen.—London Lancet.

The Treatment of Irritant Gas Poisoning.—Lazenby, in The British Medical Journal, describes a method of treating cases of irritant gas poisoning with symptoms of acute catarrh of the mucous membranes of the eyes and of the respiratory tract. He says that success depends entirely on the care with which this method is carried out and the frequency of the treatment. A warm solution of sodium bicarbonate—10 grains to the ounce—is made, and a compress of gauze wet with this solution is placed on the eyelids in severe cases when the eyes are closed through photophobia or dried secretion. When the eyelids are unsealed, the margins of the lids are bathed till all crusts can be wiped away. A Carrel syringe is then filled with the solution, a few drops instilled into the eye, and the lids closed. This is done about four times, till all secretion has been washed away; the skin is then dried with cotton wool. In mild cases the eyes may be left uncovered except by the eye shade; in severe cases another compress covered with jaconet is bandaged on lightly. A little vaseline is smeared on the skin to prevent irritation from the discharge. In respiratory cases a spray is half filled with solution. Patient sits up and gargles his throat and mouth with the solution; he then opens his mouth wide and breathes in and out, the spray nozzle being held an inch from the mouth and the jet directed to the back of the throat. (The patient must sit up and respire during spraying). Spraying must cease when the patient wants to spit out, and the operation must be repeated four times. Patients should be treated every three hours, and when cases are numerous they should be instructed to carry out the treatment for themselves, using a bath for the eyes instead of a syringe. It is advisable to isolate patients suffering from gas poisoning, as other patients near them always suffer from irritation of the throat and cough. The procedure described diminishes or completely relieves photophobia, and greatly relieves pain, although catarrh of the eyes persists. In throat cases, purulent mucus is expectorated, the dry cough becomes loose and pain in chest is lessened. Soreness of

throat usually persists. The chief benefit is relief from cough and, consequently, possibility of sleep. The best results have been obtained in cases from three to six days old. As the treatment has been carried out only on board ship, the author is unable to say whether the results are permanent; he believes, however, that if this treatment were given continuously from the beginning, the period of convalescence would be materially shortened.

Lumbar Puncture for Headache.—The British Medical Journal states that it has long been known that severe headache results in many cases from increased intracranial pressure. Instances have been recorded in which relief from such headaches has occurred after the spontaneous discharge of cerebrospinal fluid from the nose or from the ears, or from both. Hence it is not unnatural to suppose that severe recurrent headache may in some cases be due to sudden increase of the pressure of the cerebrospinal fluid, whatever the cause of this increase may be, and that lumbar puncture should relieve such headaches. Professor Mingazzini, of Rome, has recently published an account of forty-seven patients treated on these lines. All these patients had more or less permanent or continuous headaches not relieved by the ordinary methods of medical treatment; six were men, forty-one women. Cases with tuberculosis, syphilis, granular kidney, chronic alcoholism or excessive tobacco smoking, epilepsy, and intracranial tu mors, were excluded from this series of patients. In every case the cerebrospinal fluid withdrawn was found to be normal on examination, free from globulin, and contained only a few lympocytes. As a rule, the lumbar puncture made the headache worse for a few days, but a definite cure was obtained in twenty-four cases and a considerable improvement in fifteen more. No benefit resulted in the remaining eight. One patient, a woman of sixty, who had frequent headaches since her youth and daily for the preceding six months, was cured by a single lumbar puncture; another patient, a girl of 22, who had headaches for two years, after typhoid fever, received no benefit from the puncture.

It was noted that if the pressure of the cerebrospinal fluid was normal or low, lumbar puncture failed to relieve the headache; it was successful where the pressure was found to be high. The results seem independent of the quantity of fluid withdrawn; thus no improvement might follow the removal of 15, 20, or even 30 c. c., while cure might follow the withdrawal of 10 or even 5 c. c. Analysis of the histories of the patients seemed to show that the treatment acted best in cases in which the headaches had begun at the age of ten or twenty, and had later become permanent for no appreciable cause.

The patients not improved by the puncture were those in whom the headache had been permanent from the outset, or had begun later in life and become permanent after lactation or the onset of some illness, or was associated with a neurosis, such as trigeminal neuralgia or epilepsy. The pathology of these headaches Professor Mingazzini leaves, as he found it, obscure. They are thought to depend on increase in the quantity and pressure of the cerebrospinal fluid, due to some upset in the balance between secretion and absorption. Some connection between the choiroid plexuses, the main secretors of the fluid, and glands with internal secretions, such as the ovaries or testes, has been thought to exist; this would explain, in part, the frequency of monthly headaches in women and the general tendency of headaches to grow less with advancing years.

The prediction has been made that there will be among the civilian population for many months to come a high morbidity from pneumonia as an aftermath of the recent virulent and debilitating epidemic of influenza.

In anticipation of such a possibility, physicians will have their attention focused on ways and means of successfully combattaing the disease. For this reason, the studies of Dr. E. C. Rosenow of the Mayo Foundation on the protective power of partially autolyzed pneumococci (pneumococci treated in such a way that a large part of the toxic substance is removed) against pneumococcus infections, will be of interest.

The results obtained by Dr. Rosenow and his co-workers with the antigen in the treatment of over 200 cases of lobar pneumonia, apparently indicate that it exerts a definite beneficial action on the course of the disease, especially when given early, and strongly suggest the advisability and desirability of giving it a more extensive trial in order that conclusive evidence may be accumulated with respect to its efficacy.

Eli Lilly & Company with its usual acumen with respect to the needs and specifications of physicians have made

this antigen possible by adding it to their biological list, under the name of Pneumococcus Antigen. It is marketed in 5 c. c. ampoule vials, each c. c. containing 20 billion partially autolyzed pneumococci. Pneumococcus Antigen is supplied through the drug trade and may be ordered by the biological number V 903. Further information concerning this product may be secured through Eli Lilly & Company of Indianapolis.

Neurasthenic and Hysterical Cases in General Military Hospitals.—Trotter, in The London Lancet, points out the great importance of appropriate treatment of hysterical and neurasthenic patients while they are in a general hospital awaiting transfer to a special hospital. The greatest vigilance should be exercised also in looking out for symptoms of neurasthenia in patients admitted for physical disease. There is a tendency to consider such patients as cases for treatment only at the neurological center, and when diagnosis is made to mark them for transfer to the special hospital and to take little further interest in them. He believes that early treatment in war psychoneuroses is almost as important as prompt surgical treatment in appendicitis, and it should become fixed if left untreated. Although the facilities found in neurological centers may be essential for complete cure, emergency treatment could be given in the general hospital and, when a vacancy in the special hospital occurs, a patient well on the way to recovery might be transferred. Accurate diagnosis, confident prognosis, understanding sympathy and inexhaustible patience are the essentials required. The patient should, if possible, be subjected to partial isolation in a special case ward, without irksome restriction; the nature of his ailment should be explained to him, and he should be confidently assured of an early and complete recovery. In motor psychosis relaxation is secured by passive movements. Cases of flaccid "palsy" should be treated by manipulation, the patient's confidence being restored by the sudden interruption of manipulation as soon as muscular resistance becomes powerful enough to retain the limb in a momentary rigidity. Exercise and employment should be given at once, as the patient left with an idle brain will relapse or develop a physical neurosis. In the latter case, a psychoanalytical talk will often remove many doubts and difficulties in the patient's mind. The author remarks that it is an interesting speculation how far the reflex contractures of Babinski and Froment would be prevented by early treatment. He adds that visceral neuroses are often aggravated by essays in surgery.

The Solar Dressing for Wounds.—Pierra applies this term to the heliotherapy of wounds. He considers especially the local application of the solar rays, leaving sun baths, which combine free air with light and warmth, for other writers. In the solar dressing the rays exert a direct sterilizing influence on the wound surface, and moreover hasten cicatrization. The author has closely studied the action of the rays on wound healing under suitable control. He selected atonic and especially trophic lesions such as result in part from a mechanical factor, including freezes and varicose ulcers. In these torpid lesions there is no lymphorrhea, no epidermization. The rays cause first in such wounds a hyperemia which should in turn give rise to pigmentation. The latter signifies that vitality in the cells has been awakened, and with it the reparative process. Edema and lymphorrhagia may also be seen and this means that the wound is draining and cleansing itself. By taking a large number of torpid wounds of various kinds and timing them under the influence of the solar rays, he satisfied himself that healing nearly always occurred and within a relatively short time. The number of hours of exposure added up from 12 to 142 and the number of seances from 5 to 45. So much for the power of cicatrizing old and torpid wounds. The author, however, finds another indication for the rays, to wit, in the sterilization of recent infected wounds. These must of course, be accessible, for deep wounds with pockets cannot be reached by the rays. The bactericidal power is greater over anaerobes than over aerobes. It is hardly correct to speak of a bactericidal action for it is really one of mere inhibition on germ activities. The results are more inconstant than in torpid lesions and the figures quoted seem to show that the sun does not compete with other standard methods in this class of wounds, but might be of much use in the absence of the surgeon's ordinary equipment and as an accessory. The author confesses that by itself the sun would hardly answer here, but as an accessory it is of value even in bone and joint surgery.—Journal de Medecine et de Chirurgie Pratiques.

The Curse of Immobilization—Dowden (British Medical Journal) from four years' experience of war surgery concludes that the lessons learned during these years have been, first, that nature is the most wonderful surgeon, especially when encouraged; second, that septic wounds should be thoroughly drained; third, that from the very beginning frequent passive and active movements should be carried out in cases of injured limbs, steadily increasing the range; and that splints should never be used except when absolutely necessary and then only for as short a time as possible, and should never interfere with passive and active movements. Massage he considers an excellent adjunct to active movements; electricity or baths he lays little stress on. In war surgery the future usefulness of the wounded must be borne in mind, the order of importance being muscles, joints, bones; not bones, joints, muscles. The danger signal in passive and active movements is pain. If, however, adhesions have formed after prolonged immobilization, pain must be endured while the adhesions are stretched or broken. Dowden believes that thousands of soldiers have been more or less disabled for life simply through prolonged immobilization of injured limbs, and cites as examples several cases that have passed through his hands. He says: "This needless disablement of men is really the most disheartening thing I know in the war," and closes with an expression of belief that "the future will see a great reaction from this most remarkable age of splints."

Psychological Handling of Tuberculosis.—Charles L. Minor, of Asheville, North Carolina, discusses the psychological handling of the tuberculous patient in the American Review of Tuberculosis for October. In no disease is the relation between mind and body so close and so important as in pulmonary tuberculosis. This fact must be recognized as an important factor both for prognosis and treatment, and the complete confidence of the patient obtained. A proper personal atmosphere is important for the welfare of the patient and is often better obtained in an institution than in the home, especially in a cottage sanatorium where a group of patients, socially and financially compatible, are all educated to a proper attitude toward each other and toward themselves. It is essential that the patient be seen for proper psychic treatment as well as supervision. At first twice a week, and after thorough acquaintance is established once a week, should be enough. When office visits become feasible a fifteen minute interview twice a week and an hour for physical examination once a month is sufficient. The study of the mental side of the case will become so fascinating that the handling of the case becomes a pleasure rather than a task.

The tuberculous are by no means always or even often abnormal, as has been implied by some writers, though there is a good deal of neurasthenia and hysteria among them and they are apt to have a rather labile temperament. When one considers the terrifying effect for a person ignorant of the real nature of tuberculosis of first learning that he is suffering from this disease, it is no great wonder that it causes a fearful upset of his mental poise and easily produces in any but the most phlegmatic or the most self-controlled a temporary neurasthenia. There is no such school of character as tuberculosis bravely met and rightly faced. No doctor could want a more splendid work than to have a part in teaching these patients to master the bitter sorrow of sickness. He must be hopeful in order to inculcate hope. While there are many that can not be saved, there are also many who can be restored to working efficiency for long periods or for good, and even in the long drawn out chronic cases life can be made useful and filled with interests and happiness if the patients are but taught to face it aright. A foolish optimism which refuses to see the truth is a miserable thing, that only doubles the sorrow of the patient when he comes to a realization of the facts. But a wise optimism can yet give him hope and a power to fight whose value cannot be overestimated in its effects on the success of our physical efforts. Finally the physician's endeavors should be directed not merely to curing the curable patients but to heartening the apparently hopeless ones to fight to the end.—Medical Standard.

Lacquers.

The Du Pont Chemical Works, Equitable Building, New York City, has just issued a new pamphlet that will be of interest to manufacturers of builders' trunk and fancy hardware, lighting fixtures, silver and gold novelties, also articles made from wood, celluloid and glass that require a water and air-proof coating.

It describes a line of lacquers in three grades, suitable for practically all purposes for which lacquers are used.

Bladder Injuries in War.—Fullerton (British Journal of Surgery) states that injuries to the bladder form a very small proportion of the total wounds reaching the base hospitals. The proportion is about 1:3000 or 1:4000. Prognosis depends to a great extent upon associated injuries. The author's report is based on a series of 53 cases, 35 or nearly 70 per cent. being complicated by injury to the intestines, or bone or both. In 26 cases there was an injury to some part of the lower intestine and 13 of these were also complicated by some bone fracture. Nineteen cases were complicated by injury to the rectum. The small intestine was also injured in 6 cases.

The mortality of bladder injuries is very high. There were in these series of cases 13 deaths. The chief causes of death have been pelvic cellulitis, peritonitis and sepsis. The chief sequelae are bone necrosis, cystitis, calculus and stricture of the neck of the bladder.

Treatment should be conducted along common sense lines. Accumulations of infected fluid, blood clot and fecal material in the pelvic connective tisue must be prevented, if possible, by attention to the original wounds. If this is unsuccessful, however, suitable incisions should be made. The fact that urine flows over the surface of a wound is not in itself an indication for suprapubic cystotomy. If the bladder can be kept clean by irrigation, aseptic urine from the kidney does not appear to have a deleterious effect on the wound. Suprapubic cystotomy will drain an infected bladder but will not prevent pelvic cellulitis and sepsis from occurring in the perivesical connective tissue and parietes.

Tooth Impacted in a Secondary Bronchus of the Left Lung, Removal by Low-Bronchoscopy after Two Unsuccessful Attempts by Upper Bronchoscopy.—Thomson, in The London Practitioner, reports the following, in a child of ten years. The aspiration of the tooth was not noticed or even suspected at the time of the accident. According to the dentist the tooth did not fall from his forceps in the mouth, but it fell on the napkin below the child's chin. As she was recovering from the nitrous oxide anesthesia she threw up her arms and made a deep wide-mouthed inspiration. It must have been at this moment that the tooth was aspirated into the left lung. The first attempt at peroral removal failed, owing to the tight impaction of a smooth, hard body, whose slippery, conoidal surface offered no grasp for the forceps. The second failed because the patient collapsed before removal had been attempted. The collapse was possibly due to the traction on the heart necessitated by the obliquity of the bronchoscope tube in the peroral route. The removal through an opening in the trachea was found to be simple, safe, and prompt and in no way comparable to the difficulties and anxities of the two peroral attempts. The following conclusions are arrived at: Endoscopy of the air and food passages must always remain in the hands of the expert laryngologist. If he is well experienced and in regular practice he will first make his approach through the mouth and in most instances he will succeed. But in a certain number of cases, particularly the rarer and more difficult ones which occur in the left lung, the lower route, through a tracheal opening, is the preferable one to be taken in the interest of the patient. It will also be the route taken more readily by those who are less experienced. The advantages can be summarized as follows: 1. Less anxiety with the anesthetic, as we all know that the administration through a tracheotomy opening avoids all pharyngeal and laryngeal reflexes, and is therefore much smoother and safer. 2. Ability to succeed with several trained assistants, because there is no longer the necessity to mobilize the head. 3. The use of a wide and shorter tube, thus obtaining. 4. Better illumination. 5. A larger field of vision, and 6. Increased facility of manipulation. 7. Less leverage and traction on the important structures at the root of the lung. 8. Shorter sitting. 9. Greater certainty in result. 10. In the event of failure, or of the foreign body shifting its position during the seance, the tracheotomy is a decided security. Lower bronchoscopy will therefore be the necessary method in certain circumstances, or when foreign bodies are tightly impacted, or when they have receded to the deepest corners of the airway, and particularly in the greater difficulties presented by their entry into the left chest. The only drawback is the insignificant one of a slight scar.

The Ancient Canadian Empire.—Ahern gives an account of a Breton who took up the healing art without the usual process of education. He migrated to Quebec, but since he spoke no French but only the Breton language, nearly starved. In his own sketch of his life he claims to have built up a reputation which extended all over the Province. He practised

surgery as well. The death of Yves Phlem, for that was his name, took place in 1749. He left many descendants. According to his own version he received the gift of healing disease from Providence.—Le Bulletin Medical de Quebec.

Women in the World's Progress.

In this day when women's work is so important in keeping the wheels of the world's progress moving, their physical condition should be conserved in every way, whether it be in the home, in commercial offices, or in the hospital as a nurse, as the value of th ir services is beyond calculation. But unfortunately, much time is lost through menstrual irregularities, and much suffering incident to the pain thereto.

Dysmenorrhea is possibly the most frequent cause for the loss of time, and in mitigating this condition, not alone is the conservation of time an item, but the relief from pain is a humanitarian act.

In the treatment of Dysmenorrhea, Hayden's Viburnum Compound will add many hours and days of comfort each month to the lives of the sufferers. Its universal adoption and recognition by the profession was established upon the satisfactory results which it renders in Dysmenorrhea.

Given in two teaspoonful doses administered in hot water will afford relief from pain. It contains no narcotics, nor habit forming drugs, and if you are not familiar with its efficiency, a request to the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass., will bring you samples for clinical demonstration, and a brochure giving formula and many suggestive thoughts in the use of this product.

Abdominal Pain in Chronic Amebic Enteritis.—Deglos (Paris Medical) says that in the chronic enteritis of amebic cases there may occur, apart from functional disturbances of the colon, and even when colonic involvement is not manifested by localized pain and contracture, symptoms due to dragging on the abdominal sympathetic, in particular the filaments from the solar and celiac plexuses, through the mesentery. These symptoms consist of sensation of discomfort, weight, dragging, and squeezing, referred chiefly to the lower epigastric and paraumbilical regions. At times the discomfort amounts to actual pain, accompanied by a profound malaise which reacts heavily upon the mental equilibrium of the patients, generally deeply affected when the disturbance is of long standing and marked loss of weight has occurred. While aerophagia and the resulting dyspeptic disturbances are rather frequent, the stomach should not be held to account for the symptoms just referred to. In many instances, as radioscopy indicated, enteroptosis, and especially transverse coloptosis, play an important role, assister, furthermore, by the accompanying more or less complete loss of abdominal fat. The treatment comprises, in the first place, a proper diet, with emetine and neosalvarsan. Measures should be taken to promote a gain in weight. Pain or discomfort are allayed by small doses of belladonna. To strengthen the abdominal muscles, often very weak, abdominal gymnastics, very gradually increased under the guidance of a convalescent, are indicated, e. g., raising the body or the lower limbs slowly from recumbency. These exercises should be carried out morning and evening, on an empty stomach, and followed by half an hour of complete rest. When the patient begins to get up, walk about, or work, a tight, broad belt of flannel or an elastic belt will greatly attenuate the discomfort resulting from the enteroptosis.

Pneumococcus Antigen.

A polyvalent antigen of partially autolyzed pneumococci, used in the treatment of cases of lobar pneumonia, is being supplied by Eli Lilly & Company. This product, known as Pneumococcus Antigen, is prepared according to the method of Dr. E. C. Rosenow of the Mayo Foundation.

The antigen is not an ordinary vaccine, but a specially prepared antigenic substance, whose use in over two hundred cases warranted Dr. Rosenow in publishing his researches and suggesting that the product be given a more extensive trial.

In order that this antigen may be made available for wider application by physicians who desire to study its effects in private and hospital practice, it has been added to the list of Lilly products and is available in 5 c. c. ampoule vials containing 20 billion partially autolyzed pneumococci to the c. c.

Eli Lilly & Company is listing Pneumococcus Antigen under the biological order number V-903. It is supplied through the drug trade and further information concerning it may be secured through Eli Lilly & Company of Indianapolis.

"Barking" Children.

In relief of the chronic, nagging little coughs that many children get with the advent of cold and changeable weather, Cord. Ext. Ol. Morrhuae Comp. (Hagee) is of supreme usefulness.

With most of these coughing children there is a lack of tissue resistance which makes them hypersusceptible to bronchial involvements, and the need is not for soothing cough mixtures so much, as for a nourishing agent that will put more vitality into their little bodies and enable them to resist bronchial irritations and inflammations.

Cord. Ext. Ol. Morrhuae Comp. (Hagee) will do this. It has every therapeutice virtue of the plain oil and in addition is palatable and easily tolerated by young patients.

War Nephritis.—Day, in The London Lancet, points out that the course of war nephritis is marked by more or less evident changes at regular intervals of five to six days, a periodicity which is also exhibited by trench fever, but in no other disease prevalent in the war. The question therefore arises: Is war nephritis a complication of trench fever? Certain cases of war nephritis do show all the signs of trench fever, but when we consider the identity of the diseases from a closer aspect, we are confronted by various differences: (a) Ordinary and experimental cases of trench fever, as studied in the wards, show little or no tendency to develop nephritis; (b) there is no proportion between the severity of the fever in war nephritis and the degree of renal damage—many severe cases of nephritis show no definite damage; (c) war nephritis has a seasonal variation which is not apparent in trench fever. In ordinary cases of trench fever, albumin, often accompanied by microscopical amounts of blood, is often present in the urine during the initial stage; and certain patients show a remarkable oliguria independent of the pyrexia and early possible albuminuria. The urinary flow may almost be suppressed for from twelve to twenty-four hours, or there may be a marked reduction for several days, or a moderate quantity of low specific gravity urine without albumin may be passed after the fever has subsided.

Although there is a close similarity between the general features of the two conditions, war nephritis is distinguished by a definite periodicity, the seasonal incidence pointing to cold and exposure as predisposing agents. These factors may turn the scale in trench fever since a large proportion of milder cases do not report sick; consequently they are exposed to wet and cold and continue on a full meat diet, with the result that considerable strain is thrown on the kidneys injured by trench fever infection, resolution is impossible and nephritis results.

Wounds of the Ampulla of the Carotid.—Lefevre (Presse Medicale) notes that triple ligation of the common carotid and both its branches for extensive injury of the carotid amplla is attended with the same degree of risk as regards the brain as ligation of the common carotid alone, the condition may be spontaneously improved by reflux of blood through the external carotid into the internal carotid. Theoretically, anastomosis of the internal and external carotids seemed to Lefevre advisable, as in injury of the carotid ampulla necessitating the triple ligature or in ligation of the internal carotid alone, the risk as regards the brain would thus be reduced to that attending simple ligation of the common carotid. This procedure was actually carried out in a case of stellate wound of the ampulla, suture being impossible. The two carotids were joined in end to end suture by one layer of silk thread sterilized in vaseline. Ischemic paralytic manifestations were noted on the day after the operation, possibly because of kinking at the point of suture or a dressing too light around the neck. These were transitory, however, and when the patient left the hospital six weeks later, there remained only some diminution of power on the opposite side of the body.

Brutality in German Hospitals—A British officer with a paralysis of the hand tells the story of a Hun surgeon who while dressing his arm, touched it in a certain region remarking, "That is the nerve," the British officer understood and speaking German replied, "Yes, that is the nerve." The German surgeon then said to his assistant, "Here is an Englishman who understands German. Now you shall see how an Englishman can scream." He then had the prisoner's arm placed over the assistant's shoulder and bound to his back, and gave the nerve six jabs with an instrument. This beastly performance occurred in a hospital near Metz about the first week in June, 1918. At Wevelgham, last May, a sergeant in charge of a ward hit a delirious patient in the mouth, knocking his teeth in, because the unfortunate patient had placed

his hand under his bandage during his delirium, displacing it. The German sergeant had been a priest in civil life.—New York Medical Journal.

Saccharomycosis.—Ribeyro in the Anales de la Faculdad de Medicina, after deploring the lack of interest in Peru in myotic affections—which seems strange in view of their prevalence in South America and of the amount of attention which they are receiving in tropical medicine—proceeds to relate a case of a rare form of mycosis until this possibility is disproved. The patient was a young woman of 22, eight years resident of Lima, never ill, and free from syphilitic taint, the Wassermann being negative. On December 4 she fell and hurt her lower lip. Iodine tincture was at once applied over the region and provoked a cheilitis for which a soothing ointment was applied. The condition became a permanent one, rebellious to all treatment. From the description the lips were the seat of a condition much like an obstinate eczema, swollen, red, edematous, and weeping.

The Neglected Therapy of Convalescence

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

After the Long School Year

the tired school child, whether girl or boy, is extremely liable to become vitally depressed, worn out both physically and mentally, and more or less anemic. With the coming of warmer weather, this depreciated condition becomes accentuated and it is the part of wisdom to take steps to build up the tone of the organism, enrich the vital fluid by creating new red cells, and hemoglobin, and employ every available means adapted to reconstruct the cells and tissues and restore the depleted vitality. Pepto-Mangan (Gude) does yeoman's service in such condition, by furnishing an agreeable, absorbable, and assimilable organic combination of iron and manganese, the agents most needed for blood repair, and general reconstruction. It is pleasant to take, and does not irritate the digestive organs nor cause constipation.

Treatment of Ante-Natal and Post-Natal Syphilis.—Adams (British Medical Journal) says that the administration of mercury in ante-natal and post-natal syphilis of the greatest importance, but he believes also that the methods advocated are not wholly satisfactory. Immediately on the birth of a child a specimen of blood is taken from the vessels of the divided umbilical cord. A similar amount of the mother's blood is secured for the purpose of a Wassermann test. A small portion of the placenta is also obtained for the examination for spirochetes.

In the series of cases forming the basis of the author's report, the author has been impressed most of all by the large doses of salvarsan which the newly born infants are able to take and the excellent results which have been obtained. He concludes that: (1) Syphilitic pregnant women can be treated with salvarsan, even up to the day of their confinement, with safety and every advantage. (2) A mother whose blood gives a positive Wassermann reaction may, after treatment, be delivered of a child whose blood gives a negative reaction. The child may continue to thrive and give a negative reaction. (3) Syphilitic children can be treated safely by salvarsan immediately after birth. (4) Sal-

varsan combined with mercury has a more certain and quicker action in producing a negative Wassermann reaction in the child than in the mother. (5) In nearly all syphilitic children born alive treatment can convert a positive Wassermann reaction into a negative, and such children appear to become healthy and show a regular gain in weight.

Erythema Nodosum.—Marfan, in The Medical Press, London, points out that erythema nodosum was formerly classed among the rheumatic eruptions with polymorphous erythema and rheumatoid purpura. These two conditions are now recognized as constituting two distinct and separate groups, and erythema nodosum has been shown to be a disease standing in some sort of relationship to an acute outbreak of pulmonary tuberculosis. Erythema nodosum occurs only in tuberculous subjects, usually in those in whom the infection is still latent. It is the outward and visible manifestation of slight, attenuated, curable tuberculosis, and is of bacillary origin. The histological structure of erythematous tissue is typical "tubercles." The cuti-reaction is positive in these subjects and the formation of an exactly similar nodule can be provoked by injecting a minute quantity of dilute tuberculin into the dermis. Erythema nodosum is, then, a bacillaemia which can, of course, be recovered from, but which is none the less an outbreak of bacilliary infection and must be treated as such.

Poisoning by Alcohol in the Manufacture of Calcium Cyanamide.—Langlois (Bulletin de l'Academie de Medicine) states that the recent marked increase in the manufacture of calcium cyanamide has brought into prominence certain ill effects that may result among workers who make or manipulate it. The ingestion of alcoholic beverages, even in small amounts, during or just after work induces special symptoms, illustrated in the following typical cases: An emphysematous workers, aged fifty-five, who was occupied in breaking up cyanamide, took 0.3 litre of red wine at 11.25 a. m. In three minutes the pulse rate rose from 69 to 104, the blood pressure fell from 160 to 110, and the rate of breathing rose from sixteen to twenty-two. Already in the second minute there was excessive vasodilatation of the face and conjunctivae, marked pulsation of the temporals, then nausea; the man was compelled to stay recumbent, becoming faint as soon as he attemped to rise. The pressure remained 110 for an hour, then rose slowly. The signs of vasodilatation passed off in about an hour. The sensitiveness to alcohol from working with cyanamide lasts over eighteen hours after cessation of work, though diminishing during this period; it then disappears completely, even in individuals who have long been working in the factory. In dogs subjected to inhalation of dust containing traces of cyanamide, intravenous injection of but four mils of alcohol per gilogram proved sufficient to arrest the heart—an effect requiring eight to ten mils in normal animals. In rabbits cyanamide seemed to increase the sensitiveness of Cyon's depressor nerve to stimulation.

Modified Stokes-Gritti Amputation.—Chapple (British Medical Journal) recommends the complete division of the attachment of the quadriceps to the upper margin of the patella and the suture of the patella in place on the under aspect of the lower end of the femur by stitching its margins to the edge of the periosteum with catgut. One or two additional deep catgut sutures are usually required and a firm button suture should be placed through the skin flaps. By this method the patella is prevented from being displaced through action of the quadriceps and a good weight bearing end is provided for the stump.

The usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement on page 14 of this number. **"Robinson's Hypophosphites"** is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron, etc., adding highly to the tonic value.

Abuse of Milk in Young Children.—Comby would prohibit the use of more than a pint of milk daily after the completion of the first year of life while during the latter the amount should not exceed a quart daily. To subsist wholly on milk after weaning is to go without sufficient iron. The infants thus fed are anemic, fat, sluggish, constipated—in fact, really subject to a deficiency disease. The latter promptly improve upon fruit juice, purees, eggs, etc. The former alone—grape or orange juice—is sufficient for the purpose.—La Presse Medicale.

The Emergency Treatment of Gunshot Wounds—Lieut.-Col. Hill (British Medical Journal,)notes the success or failure of treatment of gunshot wounds depends largely upon the stage at which the wound comes under treatment. During the first few hours following its infliction a wound is comparatively clean, judged by bacteriological tests. The organisms have not had sufficient time to multiply in order to appear in the secretions. At the end of five or six hours organisms are frequently found in smears, and after twelve hours the wound has commenced to react. Bacteriological examination shows a large number of organisms, and these have now spread to the depths of the wound. It is, therefore, during the first twenty-four hours that the wound is amenable to surgical treatment, for after that period an inflammatory stage appears, during which the results of excision have been very much less satisfactory.

The question now arises whether it is possible to prolong the pre-inflammatory stage. The only treatment which a wound at present receives in war previous to being excised or otherwise dealt with at a casualty clearing station is the application of a first field dressing, the depths of the wound receiving no treatment. In fact, in spite of the advances in surgery, particularly in the treatment of wounds, the emergency treatment is no more efficacious than it was in the days of the Trojan wars. Since the old first field dressing appears to be totally inadequate, it has been suggested that, as soon as practicable after the infliction of a wound, it should be instilled with some non-irrating antiseptic, in order to inhibit the growth of microorganisms. When septic foreign bodies are retained in a wound, the growth of organisms would be enormously retarded by the presence of an inhibiting antiseptic. Septic cloths would become soaked with the reagent injected, and would become comparatively innocuous. Excision of the wounds could be carried out in due course with greatly enhanced likelihood of prinary union.

Several reagents which are non-irritating inhibitors of septic organisms are available. Flavine in 1 in 1,000 solution or dichloramine-T would appear to be suitable anticeptics for the purpose. Brilliant green is frequently used (as recommended by Captain Hey) as an antiseptic stain. The wound is filled with brilliant green, which acts as a guide to infected tissue, previous to the excision of the septic area. This reagent would fulfill a double purpose if instilled into the wound at an early stage, by acting as an inhibitor of sepsis, and a guide to the septic tissue. Dakin solutions are too evanescent and too transient in their action for this purpose—as, in fact, they are for any wound treatment during transport. If a five per cent. solution of salt be combined with the antiseptic reagent, the microorganisms will not only be inhibited in the wound, but an outpouring stream of serum will be produced which will carry infection from the wound, and prevent the ingress of organisms.

The technique of wound instillation is of the simplest possible description. The chosen solution is instilled by means of a fine glass nozzle attached to a Higginson's syringe, care being taken to inject fluid into the dephs of the wound. There is indication for the use of this method in casualty clearing stations. In times of pressure a patient may have to wait a day or more before an operation can be performed. The preliminary instillation of the wound with an inhibiting antiseptic solution may make the difference of the wound being operated upon in the pre-inflammatory stage, or when suppuration has commenced. Still more desirable is such treatment when it is necessary to transfer a patient to the base from casualty clearing stations without operation. By begining wound instillation within an hour or so we are treating a wound which is bacteriologically as sterile as an excised wound, and but for the tissue necrosis which follows gunshot wounds the early instillation of a suitable antiseptic might replace wound excision.

Occupational Training of Men Subjected to Amputation or Other Mutilations.—Gourdon (Bulletin de l'Academie de Medicine) reports on 5,014 cases treated in special institutions in Bordeaux. Of this aggregate, seventy-three per cent. were able to resume their former occupations with or without prosthetic devices, and without special training; twenty-seven per cent. required education or occupational readaptation. In only thirty per cent. of the series were the upper extremities involved. As compared with a normal subject the war cripple is characterized physically by a markedly reduced resistance to fatigue, and mentally, by diminished will power in beginning and continuing work. Of the series discuss-

ed, sixty-two per cent. were agricultural workers; these, of all the patients, returned the most readily to their former work. Those with an amputated hand or forearm showed practically a normal labor yield; those with an arm amputation, seventy-five to eighty-five per cent. of the normal, and those with disarticulation at the shoulder, forty to fifty per cent. Among the men with thigh amputations showed greatly reduced efficiency, yielding only fifty per cent. of the normal. Manual, industrial work can be performed by all amputation cases and in many other instances of limb mutilation, with a reduction of yield not exceeding ten per cent. The reduction in yield at the close of the training period of a mutilated subject is due principally to slowness of execution; when he is placed in a producing workshop, execution becomes more rapid. Commercial and administrative knowledge is absorbed by the mutilated, owing to their greater earnestness and maturity, much more rapidly than by the normal pupils in occupational schools. Occupational education and readaptation should be instituted as soon as the wounds have healed and before the subject is discharged from service. From the standpoint of yield it is very desirable that the mutilated should be restored to their former occupations. It would be advisable to grant special bonuses according to the degree of occupational capacity attained in comparison with severity of the mutilation.

The Health of the German Woman.—A writer in La Presse Medicale discusses this subject on a basis of data obtained from miscellaneous sources. What is true of the German woman applies even more strongly to the women of some of the overrun border countries—Poland for example. The first topic for discussion is emaciation from underfeeding. It was shown of certain women of Warsaw that they received daily but 1,400 to 1,800 calories. As a result the melting away of the fat of the lesser pelvis and abdominal cavity caused enteroptosis, chiefly in the form of nephroptosis. Other ptoses as those of the liver and stomach were sufficiently evident and good opportunities for palpation of viscera were plentiful. The broad ligaments relax and the perineum follows; the gynecologists perform prolapse operations nearly fourfold as frequently as before the war. War amenorrhea or rather amenorrhea in general is sevenfold more common; or, in other words, 7 out of every 100 women who should menstruate are unable to do so. Many believe themselves pregnant and some even have milk in the breasts. These cases will doubtless recover as soon as life becomes normal. The proportion of male births certainly increases, being now 116 to 100 girls, with a maximum of 122 to 100 in some statistics. Whether the predominance is a teleological phenomenon to offset the male deaths or a mere result of underfeeding must be left to the readers' own judgment.

Hemeralopia in Soldiers.—Danis, in the Archives Medicales Belges, says that this subject seems to be a very ancient one and a record of it is found in the thirteenth century in connection with the Crusades, when members of the expeditionary force of Jean de Brienne suffered from night blindness while in Egypt, and at the capitulation of Damietta in 1221. The historians next find the affection mentioned in 1798 and curiously enough again in Egypt in Napoleon's army. It was also seen at about the same period at the siege of Malta. The besieged were the ones who suffered. The next mention appears to be in Russia in 1812, the author supplying no details. The affection was noted in the French expedition to Algiers in 1838 and again in the Crimean war in 1854-5. During the Russo-Japanese war it was studied in Manchuria and before the present world conflict it was studied by a French ophthalmologist in the Algerian colonial troops. In most of the garrisons in Europe, even in times of peace, cases occur and this is more marked in Eastern than in Western Europe. In the non-military population, the same disability has been encountered in unfavorable economic and hygienic surroundings. Thus it has been known to prevail among the Fellahs of Egypt, the negroes on Brazilian plantations, sailors on long cruises, tunnel workers, and prisoners.

Experimental Meningococcus Meningitis.—Austrian (Bulletin of the John Hopkins Hospital) found that the cerebrospinal canal can be infected by way of the blood stream. It was possible to infect the normal cerebrospinal canal of rabbits by intranasal injection of the meningococci. The demonstration of meningococci in the nasal secretion is to be regarded as an evidence of their excretion by this route, but the conclusion is not necessarily warranted that the organisms find a direct portal of entry to the meninges through the nose. When

the animal is normal, the presence of a bacteriema does not lead to the development of meningitis, but when hypermia of the thecal vessels exists, meningeal inflammation may result. This may explain in a measure the occurence of the disease in some persons exposed, while others who come in contact with the same sources of infection remain well. Austrian says that his experiments suggest the probability that epidemic cerebrospinal meingitis, occuring in man, is to be regarded as a metastatic disease developing in the course of a general infection.

Pathogeny and Treatment of Cancer.—Cisneros recommends electroignition, which he has employed in cancer for eighteen years. He leaves the lesion open and proceeds against at the first intimation of recurrence. Electrical methods may be used also as adjuncts to the knife and one may look forward to 100 per cent. of cures in operable cases along with a considerable percentage in inoperable cases.—Semana Medica.

Germany to Educate Illegitimate Children.—Germany recognizes the rights of illegitimate children, of which she is reported to have 200,000. These children are to be educated at the expense of the State.

Iritis and Cyclitis in Dysentery.—Maxwell and Kiep (British Jour. Ophthal), observed 6 cases all from the Mediterranean area, the subjects of infection with Bacillus dysenteriae (Shiga), who developed iritis or cyclitis. They conclude that patients suffering from an infection by this bacillus may ocasionally develop anterior uveitis as a result of this infection, as pointed out by Morax. The ocular infection may or may not be accompanied by articular manifestations. These affections would appear to ocur most frequently about a month after the first signs of involvement of the bowel, but may occur as early as the twelfth day. The articuo-ocular syndrome corresponds exactly to that occuring in another infection of a mucous tract, viz., gonorrhea, as pointed out by Garrod.

Major William C. Gorgas, former surgeon general of the U. S. Army, will be retired on December 1st. When he reached the age of retirement several weeks ago, General Gorgas was recalled to active duty to make a special health investigation.

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PRESERVATION OF PUBLIC HEALTH.

By Dr. L. H. Lanier, M. D., Captain U. S. Army, Texarkana, Ark.

Mr. President, Ladies and Gentlemen, Members of the Little River County Medical Society:

The subject of "The Preservation of Public Health" is one that has not interested me, alone. It has interested all of us—and especially the physicians. If we will go back in history to the dawn of creation, we will find that just such subjects interested Moses, one of the first of the great Bible characters. We ordinarily ascribe to Hippocrates the honor of being the Father of Medicine, but I think that honor is altogether unduly conferred. I believe that if we will go back to the time of Moses, it would be quite right to place this distinction upon him. It was he who first taught us what we know of public health and hygiene, as learned from the Bible. It was he who promulgated theories and principles and put into practice things that we observe today as being exceedingly common doctrine. Then, when we come on down through the Bible history, as it relates to medicine, we find that there are many others promulgating just such theories and putting into execution just such practices with reference to the preservation of the public health. It is certainly a fact that they were not as proficient as we are today. However, they did the best they could, and the best they knew, and that is what we are endeavoring to do here today.

I made a few notes, not having prepared a paper, and I shall occasionally refer to them.

This subject should occasion serious thought on the part of every one of us, when we are met here for the purpose of discussing subjects that so vitally interest all of us. You know, and all of us know that where you have a great aggregation of people, the public health is in danger. It certainly is a fact that the larger number of people who are brought together in any limited area, the more prone will that zone become to sickness and disease—more so than where you find a place sparsely settled, and for that reason it is especially necessary for us in cities and towns, in villages and in every place where more than one family is located, to be especially careful to look well after the disposal of all offal, to look after the sewerage and to look well after every thing that will tend to prevent the spread of disease.

The subject of hygiene and sanitary science is one that today is attracting more attention than any other one subject that we read of. That is, that the laity read of. You cannot pick up a journal, a magazine of any consequence today, or even your daily paper—if it is a good one—and look all through it without finding something pertaining to the preservation of the public health. You will find in the "Ladies' Home Journal," the "Woman's Home Companion" and all our popular magazines, articles by doctors who have made a life study of these subjects, and things written to enlighten the public upon these vital subjects. And it is well that it is so, because in this country we are rapidly coming to the point where the problem must be solved. In Europe—take for instance the British Isles, composed of Scotland, England and Ireland, and all those three countries being no larger than the State of Arkansas, where great numbers of people are brought together in a limited area. They realized, many centuries before we did, the necessity of looking well after the "Preservation of the Public Health." It was my good fortune, a few years ago, to go over that country and make some little study of the conditions as they exist there, and I found that they—not only the profession of medicine, and every man in the medical profession, but the laity as a whole, were especially interested in just such subjects as we are met here today to discuss. I remember going through the Museum of the Royal College of Surgeons, in that section devoted to comparative anatomy. I saw on the great shelves in the great long corridors there, 22,000 skulls. Those skulls had been brought there from all parts of the world, and gathered from all races of people who had existed in all ages. They were put there alongside of the skulls of the monkey specie, of the ape, the orang-outang, the chimpanzee, for the purpose of comparing them—and especially for the purpose of comparing the skulls of people who existed in the pre-historic

ages to the skulls of those existing today, and the chimpanzee and monkey of today and former days. They were placed there that people might observe these things, and more especially to observe that as civilization has advanced and we have used hygienic and sanitary precautions and have increased our sphere of usefulness, as we have grown in moral stature, the configuration of the body and the configuration of the head has assumed more symmetrical proportions. It has been found, when you go back to the Egyptian mummies, and compare the configuration of their skulls with the skulls of people of this enlightened age, or with that of people who lived only a few generations back, you will find that the configuration of the heads are very different. That is, they are the same, without you closely study them, for as we have increased in mentality and intellectual faculties, our skulls, as it were, have expanded and assumed more symmetrical proportions. These things show what the country is doing to enlighten the people.

They also have departments devoted to public health, hygiene and sanitary science and various subjects that would interest one, and it would be surprising indeed for you to go there and go through those institutions and see how many of the laity—not the medical profession alone—but how many of the people, from every walk in life, are going through those various places, trying to acquire some knowledge of the greatest thing in this world—one's self.

One can scarcely study hygiene and sanitary science without realizing the necessity of having a good, clean body; and that reacts advantageously in many ways, because it gives to us a pure mind, and pure thoughts must inevitably proceed from a pure mind and an undefiled body.

It is a fact, if we go back in history—and not so very far, either—that diphtheria, smallpox, scarlet fever and the various other contagious diseases that we have to contend with, were absolutely causing a death rate that was alarming. We find such great medical lights as Pasteur, Lister, Koch, Simon Flexner and a few others in this country devoting their lives and their time to an effort to solve this problem: the problem of what is best to do to preserve the public health. It has not been long in this country, and certainly within the memory of a great many of you present, that we had smallpox, causing great epidemics, but such occurrences are now a thing of the past. We occasionally have an isolated case of smallpox, but we have to thank Jenner for his great smallpox vaccine. It has certainly reduced the death rate in smallpox until it is practically nothing. It is the rarest thing in medicine to hear of a death today from smallpox. Only a few years ago you heard of them, and a hundred years ago there were millions of deaths from smallpox.

Only one of the examples of what preventive measures have done to preserve public health is the construction of the Panama Canal, which is regarded as the greatest engineering feat ever accomplished.

Each of you know that it is a fact that the government places a certain valuation on every man, woman and child in this country, and if a man or a woman, or a child for that matter, is diseased, maimed and unable to go about his or her daily work, or whatever they are accustomed to do, so far as contributing their share in keeping up this great country of ours, then the government figures that they are a liability instead of an asset, for they become a charge on the state and government.

Occasionally today we find people, whose brain as it were, is a vacuum, or perhaps with an intense air pressure which resists an effort on our part to force knowldge into it. There seems to be an air pressure in there that forces out anything you might wish to put in there, in the way of something that might contribute to their own wellfare or the wellfare of the community, and such cases we occasionally find, say for instance in Christian Science, where a parent with a little child with diphtheria will allow it to be treated by a Christian Scientist. I have known of several instances, and could mention specific instances where little children with diphtheria have been allowed to die after being treated by a Christian Scientist, when that child could have been saved, had it had perhaps only one injection of antitoxin, and when we think of those people who are willing to shut out the life of a little child, snatch the pink from its cheek, the luster from its eye and hush its merry laugh, we are bound to think that those people are in sad need of education, especially along the lines that we are talking of today.

"No day can be so sacred but the laugh of a child
Will make the holiest day more sacred still.

Strike with hand of fire, Oh weird Musician,
Thy harp strung with Apollo's golden hair.
Fill the vast cathedral aisles with symphonies
Sweet and dim-deft toucher of the organ keys.
Blow bugler blow, until the silver notes do touch the skies
With moonlit waves and charm the lovers wandering on the vineclad hills.
But know your sweetest strains are discords all
Compared with childhood's happy laugh,
The laugh that fills the eyes with light and every heart with joy."

Environment has a great deal to do with our public health. Coming into your city this morning I noticed many things that are admirable, but one thing I noticed that I dislike to mention here, because I think you have a beautiful little city and I know that you have a good citizenship, but this one thing in particular is a great eye-sore; it is that great lot of garbage and tin cans and things that have been hauled out and dumped down in that beautiful little meadow that might be made a beautiful little park and resting place in your city. It was right close to your depot here. Those cans retain water, and are the finest place in the world for the growth of germ life. They are the known habitat of the mosquito. The mosquito lives in just such places. Germs certainly must have moisture and absence of light to grow. No germ grows where you have a full flood of light, and no germ grows without moisture, and if you will prevent moisture and give a flood of light to any place, you can certainly prevent germ life.

There are many things to consider in the preservation of public health. Up in Wisconsin this year, or rather last year, they passed a eugenic law. I know most of you are familiar with the subject of eugenics. It is being talked all over this country. This subject is certainly one that you should know of, but if you have already known something of it you will be more ready to appreciate what I have to say to you concerning it, and may we hope that they pass one in every state in the union—making it absolutely necessary that every applicant for a marriage license, go to his or her physician, be it man or woman, and stand an examination for a health certificate before they can obtain a marriage license. This is one of the best laws ever put on the statute books for the simple reason that today we have people who are tubercular in nature, and we have people with specific diseases; we have people suffering with constitutional maladis that are incurable; we have people suffering with cancer, with diabetes and Bright's Disease and various other diseases, who are daily marrying, when they are firmly within the grasp of some constitutional disease that will soon sap their vitality and soon render them unable to make a living, and they must inevitably become a charge upon the state and government. Then, too, we find that in such homes, love cannot exist. One might say for the sake of a little sentiment, "Oh, I love him so that even though he has tuberculosis I am willing to marry him any way." But when we get to that point where we allow sentiment to take the place of good common sense, then I say that we are sadly in need of just such talks as we are having from these various men here today. Love is certainly all right, and I will not try to discount its value. There is nothing more beautiful in life than an old couple, for instance, going down the hill of life, to the song of birds and the music of children's laughter. Certainly we like it. We all like to see it, but still we say that every man and woman who marries today ought to be a healthy man and a healthy woman, and they should not marry until they have a certificate from a physician stating that they are healthy, and that they are capable of assuming life's great responsibilities which are assumed in a marriage vow. I do not believe it right for a man who is a drunkard; I do not believe it is right for a man who has not the proper aspirations to show himself morally right in the community to assume the responsibility of properly taking care of some innocent little woman, when he is incapable of making her a living by reason of his physical incapacity.

There are many reforms taking place in this country, especially in an industrial way, toward the betterment of conditions in our penal institutions and in our asylums. Only a few years ago a great reform swept over this country, which we refer to as the "prohibition wave" which did much good, but other things are equally important.

Take for instance, the men who are confined in the penitentiaries of our country, for some minor crime, perhaps to be confined there 6 months or a year. He is put there in a dark cell, and a great many times he is there all day, as well as all night. He is shut out from the light,

shut out from the sunshine.. Perhaps he had a good physique when he went in there; perhaps he was able to do any kind of work. He is put there for 6 months or a year, only, and in numerous instances he comes away tubercular; in numerous instances they come away absolutely unfit to become anything except a charge of the state and government.

Our insane asylums have been disgraceful, and we have in Texas today a law recently enacted, that if carried out in every county will certainly hold Texas up to the people of the United States as being a state thoroughly abreast of the times, and that is the enabling of every county in the state of Texas to erect a county hospital, by the issuance of bonds, for the purpose of giving tubercular and insane individuals and other people suffering with contagious diseases, a clean and sanitary place to live while they are trying to be cured; and I would certainly like to see every state in the union enact a law which would make it possible to do this very thing. Today if a man becomes insane or has a little temporary mental aberation, it is the custom to go and get him and lock him up in the jail—usually a place not the most sanitary and hygienic to be found in the country—and by the way, it certainly is pleasing to notice this nice little institution you have over here. It seems that the people in this county and town are alive to the necessity of providing prisoners and insane people with a proper place to stay until some satisfactory disposition can be made of them.

It is necessary in the education of the people along the lines of public health to mention another thing of importance, and that is alcoholism. Alcoholism has made more perverts, more degeneracy, more idiocy, more insanity, more misery and poverty than any one agent ever known in the history of the world. There is absolutely no good that can come of the use of alcohol, whiskey, wine or beer, at any time or anywhere, and it never did any good to anybody in the world. As a practicing physician I want to say that I have never seen any individual helped one particle by alcohol in any form, and we have many stimulants and many agencies that will serve the purpose, and any and all purposes, and better purposes than alcohol, and we physicians rarely ever prescribe it today. I am giving this as my individual idea.

The subject of heredity is one which should engage our most serious thoughts. Heredity is a thing that is certainly good or certainly bad. If we read after Dr. S. Weir Mitchell, sociologist, great medial light and medical novelist—in fact one of the greatest physicians who has ever lived in this country, we find him giving us the history of one alcoholic individual who lived in Philadelphia, a very wealthy man, who had two children. These children inherited a predisposition to alcoholic drinks. The history shows that the young man was a moral reprobate. He married into a good family and went to San Francisco to live. The daughter was a dipsomania. A dipsomaniac, I will say, is a child born with an insatiable desire for drink. It is a desire that cannot be overcome. They are absolutely not responsible for it. We have all seen these people who drink, and have wondered why they do not take the Keeley Cure or some other cure, but it is absolutely impossible to irradicate that taste from them. So this daughter was a dipsomaniac and this on a moral reprobate, this man and woman, born of this alcoholic man. The son goes to San Francisco and raises a nice family. This daughter seeks to acquire all the property left by the father, and sets about studying medicine that she may improve her methods in her heinous plot, and we find her sending whistles, little toy whistles out to San Francisco, to be used by her brother's little children; and that they were infected with Kleb-Loeffler bacilli, the germ which causes diphtheria, and when they blew the whistles they contracted diphtheria and were lost from it. We find her attempting to destroy her brother and he attempting to destroy her. Then we find her wanting to get rid of her own mother, in her crazy, insane desire to possess all the wealth of the family, and she takes her mother up into the Sierras, great high mountains out West, and realizing that her mother was old and that the process of Arterio-Sclerosis, or hardening of the arteries had set up, and this woman figures out that if she took her mother up there in those high mountains where the air is extremely rare that it would cause her mother to have a rupture of the veins in all probability and she would die. And she did take her mother up there, and what she had thought and planned would happen, did happen, and her mother's death immediately followed.

Such crimes as these we hear of every day and wonder why it is. If you would go back and study the history of these people you would find something wrong with the parents, something wrong with their lives, lives that should have been so

ordered that their children would not have been brought into the world. Persons who do these things today—crimes similar to the one just related—who are locked up in our penitentiaries and institutions for the insane, are really not responsible, in many instances, for many of the crimes committed.

If we go back in history we find that the Greeks and Spartans were doing some of the things that the good people of Wisconsin are trying to do. The Greeks and Spartans were having a little rivalry many centuries ago, to see which race of people could bring into the world the most perfectly developed children, and they were so physically perfect that today they are the ideals of our sculptors and artists. They carried the work to such extremes that in those days they not only prohibited marriage because of constitutional disease, but they absolutely beheaded all the cripple and imperfect children, and got rid of them in that way.

It is not necessary for us today to resort to such strenuous methods to eliminate these imperfect people from our midst, but it is necessary to enact laws which will provide for only the physically perfect to marry and propagate the human specie.

There is one other thing that we should be careful about, and which the physicians, especially should be careful about, and that is the drug habit. We should be particular in prescribing drugs, that we do not make drug fiends. We have all over this country today, men in poverty and misery who have been made drug fiends, not purposely or intentionally by any physician, for there is no physician in the world who would purposely cause any individual to become a drug fiend, but there are many drug fiends, and many of them because some physician has given him narcotic drugs for the purpose of allaying his pain, when perhaps some other agency might have done equally as well.

The tobacco habit is another thing that is not only fraught with danger, but is at times a nauseating habit—I mean nauseating in the sight of some women, most men seem to like it all right. Tobacco some people say is not injurious for we occasionally have a man 85 or 90 years old saying they have smoked all their life and feel well and hearty, with apparently no bad effects from the tobacco, and that they are glad they have had that much comfort and pleasure out of the weed. Perhaps that is true; but I know as a physician—so far as it relates to my line of work—and know positively that it is capable of doing much harm. I have had people come to me with tobacco amblyopia unable to see 200 ft. letters at even 10 feet away, and in almost every instance where I take the tobacco away from them, in a week's time—if they do absolutely abstain from the tobacco—the trouble has been relieved.

Tobacco not only affects the eyes, but it affects the throat, the heart, and affects various other organs—and if you could also see the men making this tobacco! Last summer while in Chicago on one occasion I watched men making cigars, and every once in a while he would lick his fingers and then stick them down into a very dusty little jar of some mucilaginous substance, for the purpose of putting the wrapper on, and this little mucilaginous material is the finest breeding place for germs in the world. I know these men know nothing about hygiene or sanitary science of germ life and know nothing about the necessity for being careful in making things that go into other people's mouths. I believe things that go into other people's mouths ought to be clean, and these cigars were not clean and there is very little tobacco I have ever seen that is clean.

I should like to say, Ladies and Gentlemen, in the school life of your children, that they have the opportunity to acquire knowledge that will be of value to them throughout the rest of their life, and you as parents, you as father and mother, ought to be especially interested in anything that will contribute to their well being and as their sponsor, I would like to say, Ladies and Gentlemen, that the subject of eugenics, hygiene and sanitary science can be taught them in your home or in the school without any possibility, whatsoever, of transcending the bounds of propriety, and I think that is absolutely the place it should be taught. It is absolutely not right to allow a young boy or girl to grow up without acquainting them with the various physical phenomena with which the Creator has endowed them, and build up their moral stature so fine that they will have enough courage and enough good convictions to come out without being tainted.

You ought to instill into the minds of your children, not only these hygienic and sanitary sciences, but also instill within them an effort to succeed in life. You know it was Napoleon who said "impossible" was not in the dictionary; said he looked all through it and never found it. And I want to say this that a sickly

man cannot succeed in this life, because it takes at this day, and in this strenuous age, an exceedingly good physique to resist all of the various diseases which we come in contact with.

I want to say a few words in regard to what is being done in suppressing infectious and contageous diseases. In this county, in Miller county and every county of the state, we have had men sent out to us to study hookworm. We have had men come to us who are experienced in that line. They have gone all over the country, into the remotest districts, and found many people suffering with hookworm, and have taught these people how to absolutely do away with it. Not only how to cure the disease, because it can be cured, but how to prevent it, and I consider this one of the greatest things that has been done in this country in many years.

We have another disease—Pellagra—which is certainly ravishing the mind and health of many of our best men, women and children in this country. Pellagra, I am sorry to tell you, we do not know so much of. We know something about its treatment. We do not know how to check its spread, except to observe ordinary hygienic precautions. However, the number of cases, according to the population, seems to be less today than they formerly were.

So far as yellow fever is concerned, yellow fever, as well as smallpox, is rapidly becoming a disease that may soon be known only in the history of medicine. We have had some of the greatest martyrs that have been known in history. Talk about martyrs in other professions and talk about martyrs in history, but they have never had any to compare to those men we sent out to Havana and down into Cuba to make a study of yellow fever, who to demonstrate to the people that a certain variety of mosquito did absolutely convey yellow fever, went inside of screened cages and permitted that certain variety of mosquito to bite them and lay down and died from the effects of yellow fever. They did this to demonstrate to the people of the world that that mosquito did cause yellow fever. And what is the result? The building of the Panama Canal today is certainly one of the greatest monuments ever erected to man. We went into that country when it was teeming with pestilence, slime and filth, and if we had not been shown the necessity of screening and the necessity of observing these sanitary precautions, the Panama Canal would not be so nearly finished as it is today. Would not have been built at all.

Tuberculosis.—We find today that we are absolutely able to cure tuberculosis. We find today that we cannot always prevent it, but that if it has not gone too far, we can certainly always cure it. Tubercle bacillus finds its greatest enemy in good rich, red blood. We find that if we live out of doors, or if we will raise the windows if we live in the house and let the pure fresh air and sunshine pour into our homes; if we drink milk and eat eggs and such diet as tend to build up your red blood corpuscles, that that germ may be destroyed. We do not know just how it attacks the tubercle bacillus but we know that if we have good pure rich blood that the tubercle bacillus cannot live.

A few years ago we used to think that people suffering with scrofulous glands could not be cured, but now we know that we can take a little glycerine and carbolic acid and inject it into the glands and absolutely cleanse the parts of disease.

We are also making great strides toward accomplishing what we have looked for so long, and that is the cure of cancer. We do cure, today, many cases of cancer, and I feel sure that it will not be long until we will be able to accomplish even greater results along this line.

Organization, the mighty force that causes great men to weave at the loom of civilization and threads the destinies of nations and causes us to come out with a united effort to uplift suffering humanity.

Now with all respect to the many other admirable manifestations of the fraternal spirit among men, pardon me if I say that the fraternity of medicine, the men in medical organizations are today, I believe, doing more for the uplifting of humanity than any other people in the world.

I want to thank you, Ladies and Gentlemen, for your kind attention, and I want to thank my brother physicians for the honor they have conferred upon me in asking me to say something at this meeting.

Legitimate and Illegitimate Children in Prussia.—In 1914 the number of legitimate births in Prussia was 1,067,408; of illegitimate births, 99,172. The death rate among the former was 2.85 and among the latter 4.47. The causes of death were congenital debility 35 per cent., diseases of the digestive tract 44 per cent., and the rest scattering.—Nederlandsch Tijdschrift voor Geneeskunde.

MECHANISM OF AFFECTIVE REPRESSION, FIXATION, REGRESSION AND DISSOCIATION.

By Herman P. Hyder, B. S., M. D., Assistant Physician, Saint Elizabeth's Hospital, Washington, D. C.

In the history of the evolution of man we find there are certain factors which have been active in the making of his destiny. Many forces have acted from without but his manner of reacting to his environment may be accepted as the basis of conduct, of moral standards, of manners and convention, of love and hate; in fact, all the reactions of human beings. However, this reaction is not determined entirely by the individual's ontogenesis, but were we permitted to scan the myriads of years in search for stored up memories of the unconscious, it readily would be seen that his phylogenesis plays a very important role in determining the nature of an individual's emotions.

In the early days, subsequent to creation, an all wise Providence deemed it improper for man to be alone, but that he should be governed by the bonds of society. During these many years of his almost constant contact with others of a similar make-up, naturally he has developed certain mechanisms of affective response.

In adjusting himself to his environmental conditions, man is in the midst of a constant conflict, conflict being the very root and source of life. He comes in contact with both pleasant and unpleasant experiences, forms likes and dislikes, learns to love and to hate, any one of these responses being determined largely by the nature of the experiences in question.

According to Freud, there are two working principles in the human mind; one the principle of pain-pleasure, the other that of reality. Many analysts believe that the unconscious is controlled exclusively by the principle of pain-pleasure, while consciousness governs the principle of reality. Freud is convinced that the first part of the statement is true; that the unconscious is controlled by the principle of pain-pleasure but that this must be taken hypothetically, because there exists no opportunity to observe directly any unconscious phenomena. Our knowledge of unconscious processes is obtained only after they enter into the conscious, and then they can be studied only by the analysis of their conscious manifestations. Freud has concluded, therefore, that the unconscious processes follow only the principles of pain-pleasure. This principle refers to the reactions which every stimulus initiates in the psyche, regardless of whether the stimulus is due to external or internal psychic elements. The unconscious psyche is constantly endeavoring to rid itself of pain and to ever obtain pleasure. The basis for the assumption of the principle of pain-pleasure is the fact that every manifestation of the unconscious shows a striking tendency toward wish-fulfillment. Although this tendency frequently fails, it nevertheless is present, and the unconscious never gives up its struggle against pain and for the establishment of pleasure. In the phylogenesis of man many factors have been influential in modifying his wish-fulfillment principle It has been found by experience that the gratification of pleasures were followed by sickness or starvation, by imprisonment or slavery, etc.

Taking into account the impressions made by past experience and also the fact of his being limited by certain moral and social conventions, leads man into the repression of many affective desires.

By the term "repression" we mean the putting out of consciousness and a transfer to the unconscious realm. How this retransportation occurs, it is not at all easy to determine. The question might be asked, if the repression has its root in a conscious determination of the individual or does this take place passively without the conscious knowledge of the individual? It is the opinion of some writers that it is accomplished by the existence of a conscious tendency to repress what is painful. But, on the other hand, there are instances where it is impossible to show the slightest trace of conscious repression. In such cases it appears as if the mechanism of repression were more in the nature of a passive disappearance, and that it was dragged beneath the surface by some agent operating from below. In the first mentioned class, there is more complete mental development while in the latter there are more serious signs of lack of mental development. The chief factors in influencing the first class appears to be education and environment, while in the second, predisposition seems to be most important.

If gratification is denied to a feeling, or to an unconscious wish through the censor of consciousness, then what is known as repression of that wish occurs—of course, the amount of repression depending partly on the strength of the wish and partly on the strength of the psychic censor. In this way a wish may be repress-

ed but it is not necessarily rendered inactive. It still may play an active role in the patient's mental life, though it be inactive for many years. If the wish is not subject to repression it will appear directly to consciousness, but if the psychical censor be of sufficient strength to prevent it from making its appearance in the consciousness of the individual, it will show itself indirectly in the unconscious realm.

In the infantile period, the pleasure principle seeks the continuance of the gratification. Gratification of the sense is brought about by the auto-erotic area involved. But later on in life when the subject realized that he is governed by conventionalities which do not tolerate such practices, the psychic censor is called into action and repression is accomplished.

Among the group of forces which cause the repression, the greatest is the demand which cultural environment imposes on the growing individual, to which he cannot submit without giving up his infantile desires. Certain desires are repressed and cut off from direct affective expression but they may yet exercise a determining influence on the most important processes of the mental life of the individual, though they be excluded as far as possible from his consciousness. In the conflict which ensues the psychic censor may be overthrown and the wish-goal obtained by hallucinations and various delusional ideas during a psychosis. When an affect is repressed it becomes fixed and may not make its appearance in consciousness again.

In the preceding statement it is not to be understood that with the fixation of the affective response its influence is at an end.

The mechanism of affective fixation is understood to be the placing of the affectives on some particular person, as the son toward the mother or the daughter toward the father. Both are adequately explained by the Oedipus and Electra complexes respectively. These two involve the same principle of affective fixation and the writer shall only attempt to give a brief discussion of the mechanism of the one first mentioned.

In the beginning, the Oedipus complex is an hypothesis. It is a formulation to be used in the handling of facts. Dr. Jelliffe says, "It can be used as a unit of measurement for all psychological situations, not only for these variations which are only perceived when they become great or inconvenient, and hence called abnormal, but for every normal psychical activity as well." It may be used as a unit for the understanding of all psychical situations. Every individual has to deal with the Oedipus phantasy, and the manner in which it evolves its infantile stages determines whether or not he shall be classed as a neurotic.

This hypothesis received its name from the Greek myths, a drama, Oedipus Rex, who killed his father that he might wed his mother. Therefore, its settings are obvious. It attempts to establish some criterion or standard for the estimation of the value of human conduct as it looks forward to its ultimate goal. It first directs attention to getting away from the type of individual represented by the parent of the same sex and to a going toward the type of person represented by that of the opposite sex.

The father hate and the mother love mentioned are not to be considered in terms of a conscious level but, on the contrary, it has nothing to do with conscious psychology. Its dealings are altogether with the unconscious. Much information of the patient's psyche may be gained by the careful taking of a family history. You get a fair estimate of his feelings toward the other members of the family, but his conscious attitude toward the others of his family cannot be taken as a criterion to signify his unconscious desires, yet they may throw some light on his early infantile affects. In the family is where the individual gets his first social lessons and also where he first begins his evolution from phantasy into reality.

In the course of events, the boy soon develops a feeling of antagonism toward those of the same sex and is attracted toward those of the opposite sex. Every child has more or less egoistic fancies and in the order of his development some of these childish phantasies are repressed into the unconscious, there remaining infantile; and in later years lay the ground work for the development of a psychosis. Freud has pointed out that the neurotic has retained certain of his infantile strivings in his own unconscious realm.

Instead of getting away from the two parents as the biological laws demand, the psychotic places his "libido" affective on the one of the opposite sex, while he unconsciously retains a repressed dislike for the one of the same sex, the failure to separate his affective strivings from his parents being paramount to a neurosis. While very young, the son's ambitions may be to grow up in the likeness of his father, but as he grows older and be-

comes acquainted with other fathers, and as there are trifling occurrences in the child's life which induces a mood of dissatisfaction, a criticism of the father results. The same feeling may be present toward the mother but as there is a certain amount of sex element present the latter is not so important. There is a more hostile feeling toward the father and a greater tendency toward emancipation from his authority. In later years this feeling may be kept well beneath the surface by the psychic censor, yet its presence is usually determined by a careful psychoanalyst and found to be the root complex of his psychosis should one intervene. The motives of revenge and retaliation in such an individual may have had their origin in some punishment inflicted by the parent to break him of a bad sexual habit. The trying to get away from the father may be only apparent and it may be a desire, a romantic phantasy, the substituting of the father by a more important personage. It may be an attempt on the individual's part to go back to the time when his father was the strongest—the greatest man, and his mother was the dearest and most beautiful woman in the world.

It is seen that the Oedipus complex involves two contrasted situations, one of the unconscious attachment to the parent image of the opposite sex, and the other by the unconscious antagonism for the father image.

One of the latest achievements of the analyst has been to bring to the forefront the actual cause of the conflict by guiding the patient's attention directly to the scene during which the symptoms had arisen and to endeavor to free the suppressed affect. In this way the procedure characteristic of the psychic processes of the neurosis has been discovered. This has been termed "regression." The setting for the manner of reaction of the individual may be traced to some past experience, and under conditions of stress there is a flowing backward, as it were, a re-animating of an old experience—an introversion of the "libido."

Normally the individual is constructive, creative, mentally healthy. This condition continues so long as his energy flows outward on the external world; but when it flows backward into the individual himself, a mental disorder is the result. This regression is brought about by his dealings with reality. A difficulty arises and adjustment is impossible. The outward channel being blocked, the "libido" takes a backward course and flows along infantile channels.

Dr. White says, in discussing the meaning of regression, "The first and most important fact which seems to be in evidence is that regression means failure and that the degree of failure can be measured by the degree of regression." The degree of regression present would be taken as indicative of the seriousness of the situation. If the "libido" remains within the limits of the individual's ontogenesis all is well, but should it regress to the phylogenic level, the outlet is obtained through channels which conform to the individual's mental level. In the strivings between the social ideals on the one hand and the older levels on the other, the latter is victorious; therefore, mental illness ensues.

There would be no symbolization if there was no conflict—no failure. The failure to deal successfully with a situation may lead to dissociation of the personality.

When an idea is found to be incompatible with the ego, it may be treated in one of several ways. If the affect is not a strong one, it may be simply overlooked as making no impression in consciousness. But should the affect pass the threshold and be incompatible with the social or moral obligations of the individual, then we have the maintenance of two lines of thought. An example would be the writing of a letter and at the same time carrying on a conversation. The difference between this and a psychotic dissociation is that the dissociation of the normal person is only temporary or partial and under control of the will; while in the other, the dissociation is complete and is beyond the individual's control. In normal mental life the ideas develop in a sequence, the thought expressed having a definite connection with those preceding and following it, while in the psychotic it may not be so.

In recent years the many psychoanalysts have attempted to show that there is some situation in the individual's early life-setting which has furnished a basis for the mental disorder. Jung has said, "No neurosis will grow on an unprepared soil where no germ of a neurosis is already existing." In this statement it is not to be understood that hereditary predisposition be taken as the sole basis for the psychosis, but that a psychological development is necessary, which culminates into a crisis when the strain on the nervous energy is too great.

In considering these affective re-

sponses, we turn to search for the causative forces which bring about these mechanisms in an individual. As already alluded to ,the demands arising before and at puberty from the organic changes, and the demands of environmental conditions together with education, cannot be submitted to without giving up infantile fancies. Here the division between the conscious and the unconscious is first noticeable. There are two distinct opposing factors side by side. They cannot exist thus, so the stronger assumes the initiative and the other is crowded into the unconscious. The unconscious affects may be brought to the surface by the spokesman for the unconscious and pour forth information concerning the wish-goal, when the psychic censor is off its gaurd.

Man has always tried to attain his desires. The adjustment to his environment has imparted to him much useful knowledge. It has been a long and painful pathway since primitive man first began to utilize the materials for the gratification of his wishes. Many methods have been crude but he has been on the right pathway. Since the methods of psychoanalysis have become an established factor in ascertaining the etiology of mental disorders, much has been done in bringing to light many of his early experiences. With a knowledge of these early experiences of man, the way has been made possible for the determining of the mechanism of his various affective responses.

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The Du Pont Chemical Works, Equitable Building, New York City, has just issued a new pamphlet that will be of interest to manufacturers of builders' trunk and fancy hardware, lighting fixtures, silver and gold novelties, also articles made from wood, celluloid and glass that require a water and air-proof coating.

It describes a line of lacquers in three grades, suitable for practically all purposes for which lacquers are used.

SPASMOPHILIA—REPORT OF A CASE IN THE NEWBORN.

By Aldert Smedes Root, B. S., M. D., Pediatrician to Rex and St. Agnes Hospitals, Raleigh, N. C., and Consulting Pediatrist to the State Board of Health.

Spasmophilia in nursing infants is of uncommon occurrence, and in the newborn is exceedingly rare. It is for this reason that the following case is of interest.

Baby K., male, was born June 9th, 1918, of healthy parents. The father, a tailor, is 28 years of age and the mother, whose duties are domestic is 22 years old. So far as could be ascertained, there was nothing in the family history which would suggest a hereditary tendency towards spasmophilia.

This child, the first, was a full term baby, with a birth weight of 9 pounds. Delivery was normal. The hygienic conditions surrounding the home are fair, the family living in a well ventilated front room flat of 3 rooms upon the third floor.

The baby was seen four days after birth and the following history obtained from the mother.

Six hours after birth, when placed to the breast for the first time, the mother noticed twitching of the eye lids, and upon the following morning spasmotic contractions of the left side of the face, left arm and hand and left leg. These "spasms" accompanied by rolling upward of the eyes and twitching of the eye lids, recurred at intervals of every 5 to 10 minutes throughout the day and at nights when awake. They lasted for about a minute, during which time the infant would grow red in the face and "struggle for breath." Nursings at two hour intervals were always interrupted by these attacks. He was restless and wakeful at night, crying a great deal and starting at the slightest noise. There was no constipation—his bowels moving 3 or 4 times daily. The mother had an abundance of breast milk.

Physical Examination.—A well developed, well nourished infant in a state of "Status Eclamplicus." Except for the symptoms arising from extreme nervous hyperirritability and slight bulging of the fontanelles; physical examination of head, ear drums, mouth and throat, neck, chest, abdomen, genitals and extremities, was negative. Clonic convulsions, beginning in left side of face, arm and leg on left side and rapidly becoming general, were observed at intervals of every 10 to 15 minutes. They lasted for one-half to

one minute, during which time the child lost consciousness. The bicipital and patella reflexes were greatly increased. Chvostek's sign was markedly positive, tapping over the facial nerve trunk being answered by contractions of the muscles supplied by both upper and lower branches of the nerve. Trousseau's sign was positive.

Treatment.—Except when nursing, the mother was advised to keep her baby out of doors the entire day—to nurse the baby at 3 hour intervals and to give 5 grains of calcium lactate in solution every 3 hours. Sodium bromide prescribed by the family physician was continued and warm baths recommended.

During the following 24 hours the baby had only 3 convulsions and has had none since that time—a period of over 2 months. He now appears normal in every way, weighing 11 1-4 pounds. Neither Chvostek's nor Trousseau's phenomena are present and tendon reflexes are not exaggerated.

Discussion.—Since Spasmophilia is with little doubt due to a faulty metabolism of mineral salts, especially of calcium, calcium has theoretically been administered, usually as the lactate or chloride. This would seem rational therapy, since the brains of infants having spasmophilia have been found to be deficient in this salt, and furthermore these children possess a negative calcium balance.

Breast milk, given to spasmophilic infants who are artificially fed, is almost always a specific remedy for the condition. The rapid recovery of the infant, whose case is reported above, and who was obviously born with a negative calcium balance, most probably had this balance restored by the salts received through the mother's milk—rather than from the calcium lactated administered as a therapeutic agent.

Modified Stokes-Gritti Amputation.—Chapple (British Medical Journal) recommends the complete division of the attachment of the quadriceps to the upper margin of the patella and the suture of the patella in place on the under aspect of the lower end of the femur by stitching its margins to the edge of the periosteum with catgut. One or two additional deep catgut sutures are usually required and a firm button suture should be placed through the skin flaps. By this method the patella is prevented from being displaced through action of the quadriceps and a good weight bearing end is provided for the stump.

A DISCUSSION OF SOME CLINICAL PROBLEMS IN UROLOGY.

By E. P. Merritt, M. D., Atlanta, Ga.

Briefly will I mention a few conditions oftimes met, and more or less puzzling or confusing.

Common kidney conditions—1st, stone; 2nd, Pyelitis; 3rd, Tuberculosis.

Stone either in the pelvis or substance of the kidney (99 per cent.) gives pain, probably not constant, but by attacks. Usually there is tenderness over the kidney region on deep pressure. The clinical symptoms are governed by size, shape and location of the stone. The majority of kidney stones are in the pelvis, the main composition being urates, phosphates, etc.

The etiology of the stones will not be gone into here for as opinions vary so widely, it would demand too much space.

The symptoms of kidney stone are many, and in the large majority of cases, misleading. The usual clinical symptoms briefly are: pains in the lumbar region, radiating downward to thighs and legs, tenderness on pressure, history of attacks of colic; perhaps some blood in urine; nearly always pus. The diagnosis is practically easy; that is if the type of stone will show under the X-ray; if not, other methods must be used. The microscopical study, after usual cathaterization has been done will generally show a few blood and pus cells, which are constantly present where the stone lies in the pelvis.

It is always advisable to have kidney stones removed if the general condition of the patient will permit, as degenerative changes take place if it is allowed to remain. Before operation a functional test should be made of each kidney to determine the soundness of each.

Second. Pyelitis or infection and inflamation of the kidney pelvis. The bacteria gains entrance to the kidney, according to Cabot and Crabtree, through the blood channel or hematogenously. Other men favor the lymph channel theory or lymphogenous; others favor the direct route. Probably all are right to some extent.

The symptoms are much like those of stone, for oftimes stone formation gets its birth from an old case of pyelitis. The patient complains of pains, dull ache in the back or lumbar region, sometimes a degree of temperature; the pains are constant and severe at night, causing insomnia, and frequent micturation. Foci should be sought for when the diagnosis

is made, as the condition is usually secondary.

The diagnosis is readily made in majority of cases by careful cystoscopic methods. The urine contains pus and different types of bacteria in abundance, but not always, as it is not a rare thing to have to inject a guinea pig's peritoneum to find the organisms. The most common bacteria found are colon bacilli, strepto and staphylococci.

Patients as a rule respond readily to autogenous vaccines, kidney lavage and proper instructions as to methods of living.

Third—Tuberculosis usually unilateral in its secondary clinical symptoms, the patient doesn't complain of a great amount of pain, perhaps a dull achy feeling, and blood in the urine. The constitutional symptoms of tuberculosis are usually present.

The diagnosis is made by the above symptoms, pus finding the tubercle bacilli in the urine after ureteral catheterization. If a smear is made and stained, as sputum is prepared, and the bacilli are found that is by no means conclusive, as it is nearly always necessary to inject the guinea pig to determine the presence of tubercle bacilli. Of course in advance stage of tubercular kidney the functional test would be below par, and this would have to be taken into consideration also. Surgical interference or nephrectomy is indicated where unilateral kidney involvement is found.

Ureteral maladies often met with—1st, Stones; 2nd, Kinks.

1st. Stones lodged in the ureter give rise to many symptoms, varied in character. Most of the "kidney colic" so often heard of is due to stone lodged in the ureter, which if not recognized and not expelled takes only a short space of time in the majority of cases to cause added pathology to the kidney.

The clinical symptoms are many, for even appendices are removed, sometimes when the real cause is stone in the right ureter.

Common symptoms: pains, colicky in character, reflexed to genitals down the thighs and back.

Sudden onset, pains sharp and cutting in character, frequent urination, with possibly some blood in it are frequently observed.

Diagnosis—X-ray shows a large percentage, but if it fails, the cystoscopic methods already described by the author in another article, namely by aid of the operating cystoscope, etc.

Second, Kinks—Kinks of the ureter cause great kidney distress if sufficiently kinked so as to shut off the flow from the kidney to the bladder, thus setting up distension in the kidney.

The clinical symptoms are about the same as stone in ureter, plus higher pains, covering more territory; this holds true when total obstruction takes place. The diagnosis, plus the clinical symptoms is made by catheterizing the ureter. Have patient standing at the same time injecting some opaque fluid up the catheter. Have X-ray picture made while fluid is in the ureter and kidney. This generally gives a perfect outline of the kink, also the sizes of kidney pelvis.

Bladder conditions that are common—1st, Cystitis; 2nd, Stone.

1st. Cystitis.—The reasons are many in number, possibly the most frequently met with is mixed infection, namely streptococci, staphylococci and colon bacilli. The real gonococci are not seen, oftime as though to be. Of course, many cases are due to old or new gonorrheal obstruction, and pressure plays a great part in the etiology of cystitis. The clinical symptoms are very plain as a rule, as the point of the tenderness is over the bladder region, and the urinary findings are easily recognized.

Diagnosis is made by the urinary findings, microscopically usually. The cystoscope is of great value here, as the bladder walls are directly in view, and conclusions may be made immediately.

The treatment will not be gone into here, as it varies so with each individual case.

2nd, Stone.—There is no condition in medicine or surgery that is more illuminating as to the symptoms than stone in the bladder, as practically every case is the same when the stone is of any size.

The clinical symptoms in short are pains in the bladder region and rectum. When referred to the genitals, pains more severe on exertion.

In the male they are referred to end penis, shutting off while urinating with a biting sensation.

Diagnosis.—Pains as above mentioned, urine cloudy with pus, red cells and bacteria, also stone deposit, albumin, etc. The cystoscope, if it can be passed, is a sure diagnosis, if the bladder is thoroughly inspected. If obstruction is too great for admittance of scope, then a small stone searcher is of use.

The X-ray is of great value also.

Conclusions.—This little outline is not intended to teach any important clinical

or diagnostic lessons, only touching upon each subject lightly.

MUCOUS COLITIS—A SURGICAL PROPOSITION.

By Leon K. Baldauf, M. D., Louisville, Ky.

The following case is reported primarily to illustrate the fact that all cases of mucous colitis are not secretion neuroses of the large bowel, which may occur in nervous and hysterical people. Many cases may have a definite pathologic basis and the associated nervous symptoms may be the result of the definite lesions. Where medical means have not been successful, search should be made for some definite lesion especially in the gastro-intestinal tract. This may be corrected surgically.

Report of Case.—Mrs. M., A. Mississippi.

Family History. Negative.

Past History: Pneumonia, measles, and mumps as a child. Seven years ago had a severe attack of typhoid fever. Convalescence protracted.

Present Illness: Dates from typhoid fever attack. At present after eating patient complains of severe pain over the entire abdomen, but most marked in the region of the gall-bladder. This may continue for two or three hours. It occurs after each meal, and especially after a full meal. At this time and dating back three years, patient has been passing large amounts of mucus, some of the masses assuming the shape of the bowel. During this time the patient has had rather severe paroxsysmal attacks with severe colicy pains, when in addition to the pain large amounts of blood and mucus were passed. She complains of severe tenderness over the course of the large bowel. Relatives say she has been very nervous about her condition, and at times was very emotional.

Physical Examination: Patient is slightly anemic, and has evidently lost some weight. Patient says about 15 pounds. The abdomen is full, exquisitely tender over the gall-bladder region and decidedly tender along the course of the big bowel. It was proven subsequently by a bismuth meal and X-ray examination that this tenderness was confined to the large bowel.

The blood examination was negative except for a slight secondary anemia, reduction of the leukocytes and a relative increase in lymphocytes.

The urine examination revealed a large amount of Indican. Examination of the stools showed large quantities of mucus, and some blood revealed by the microscopic examination and the test for Occult blood. Repeated examination for amoebae were negative.

The X-ray diagnosis: Probably adhesions around the gall-bladder and appendix.

As stated before, the large bowel along its entire course was decidedly tender. After a medical treatment for a number of weeks, rather similar to the treatment prescribed by others for some time, including colon irrigations and gastric lavage, with little benefit, surgical intervention was suggested.

On June 23, 1917, patient was operated at Rochester, Minnesota, and the gall-bladder was found buried in adhesions and was removed. The appendix was found also bound down by adhesions and this was removed.

Subsequent History: In July, 1917, patient had slight attack of colitis. In April, 1918, had a similar attack. Since then there have been no attacks and during this time there have been no paroxysmal attacks. Patient at present time may pass a small amount of mucus, but there have been no definite attacks and no pain for a number of months. Patient is no longer nervous, appetite is good and digestion is satisfactory. She has regained some of the weight which she had lost.

(2) "Nothnagel maintained that no pathological lesion in the colon (referring to cases of Mucous Colitis) could be found, but he was admittedly unable to see whether such a lesion was present or not, with the exception of a few cases in which the patient died from some intercurrent disease, and a post-mortem examination was possible."

"I have collected 80 cases of this condition in which data have been obtainable, and it is on this evidence that the statements here made are founded. In the series here given only those have been taken in which either some lesions of the colon was found to be present or in which such a lesion was more or less definitely excluded, either by post-mortem examination or by operation. Of the case which I have collected, I will take those first in which no cause for the condition was discovered. There are 14 such cases. In 4 no lesions were found but blood was present in the stools in addition to the mucus. In none of the remaining 10 cases was the whole colon thoroughly examined and they cannot therefore be taken as certain evidence that no lesion was present. In all the other 66 cases, a definite

lesion was known to be present. The nature of the lesion varied considerably.

Adhesions and Pericolitis causing more or less kinking and obstruction	14 cases
Enteroptosis of the colon	5 cases
Chronic Appendicitis	5 cases
Inflammation or Displacement of the Uterus or Appendages	2 cases
Previous Operation upon the Abdomen and involving the Colon	2 cases
Chronic Inflammation of the Colon	30 cases
Cancer	7 cases
Fibre Stricture of the Sigmoid	1 cases

"In true chronic Colitis, appendecostomy should be the operation of choice in all cases where medical treatment has failed."

In this case all medical means and treatment was resorted to. The nervous condition of the patient was dealt with; alkaline colon irrigations were given for a number of weeks. There was no improvement in the condition of the patient. A surgical solution was finally sought. A definite lesion was discovered, and with only slight recurrences for a short period after the operation the patient continued to improve, and has now practically recovered.

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Osler, Practice of Medicine. Eighth Edition.

(2) Mummery, Diseases of the Colon, page 127.

After the Long School Year

the tired school child, whether girl or boy, is extremely liable to become vitally depressed, worn out both physically and mentally, and more or less anemic. With the coming of warmer weather, this depreciated condition becomes accentuated and it is the part of wisdom to take steps to build up the tone of the organism, enrich the vital fluid by creating new red cells, and hemoglobin, and employ every available means adapted to reconstruct the cells and tissues and restore the depleted vitality. Pepto-Mangan (Gude) does yeoman's service in such condition, by furnishing an agreeable, absorbable, and assimilable organic combination of iron and manganese, the agents most needed for blood repair, and general reconstruction. It is pleasant to take, and does not irritate the digestive organs nor cause constipation.

CARE OF THE PATIENT AFTER SURGICAL OPERATIONS.

By C. W. Canan, M. D., B. S., Drkney Springs, Virginia.

A few years ago we wrote a paper on the after care of our surgical patients. We received letters of comment from various physicians stating that the knowledge conveyed in that article had been of great help to them, as it was intended to help the physician who operates without hospital facilities. The doctors in the smaller towns and the country physician is compelled to operate in order to save life, therefore he needs every help possible to carry his patient through successfully. We will in this paper endeavor to lay stress upon some points of grave importance that were only mentioned briefly in the first paper. Also we will give some important facts about the after treatment of our surgical patients that we have learned since that date.

Shock.—This is the first subject to which we call your attention. The doctor who operates upon patients in their own homes or at that of a friend or some railroad station (as I have seen done again and again) without any special preparation and under the most adverse circumstances imaginable, is much more likely to have shock to contend with than otherwise.

In well regulated hospitals where patients are dieted, bathed, purged and prepared for the operations, shock is rare; but compare this with picking up a patient with a leg rolled into a mangled mass of flesh and bones by car wheels or a great place crushed into the head with brain matter oozing, by a piece of timber flung by a circular saw, or a man pinned to mother-earth by a limb through his chest, from a fallen tree, or a penetrating wound of the abdomen with viscus protending or a dozen other conditions where the operation is imperative. No time to put your patient in condition, you must operate and that quickly if you would attempt to save life. Many times I have operated upon a table composed of two store boxes and a couple of plank or an old door laid thereon with no heat except that furnished by a couple of blankets or a piece of tarpaulin or canvass. Under such conditions and especially if the patient has lost much blood, shock is to be feared. In such cases, do your best to avoid loss of heat, blood and time. Give instructions to those who are willing to help to prepare the bed, to fill bottles, jugs or fruit cans with hot water,

Under such conditions as I have described the operating table is no place to treat shock. You can give a hypodermic of whiskey, should it be at hand (which is seldom the case), better give a small hypodermic of morphine, than bend every energy to the rapid completion of the operation. Arrange to have the bed ready with plenty of artificial heat so there will be no delay of getting the patient to where heat can be applied after the operation is finished. Raise the foot of bed or cot to facilitate the return of blood to the anemic brain. Then with a fountain syringe filled with normal salt solution force into the bowel by low pressure enough to fill the half empty blood vessels. By this method, if the right pressure is arranged many quarts of solution can be introduced without discomfort. The solution should be kept at normal blood heat, by adding warm solution from time to time. We find a large size soft rubber catheter introduced into the bowel and the end fastened to the tubing or nozzle of the fountain syringe makes a fair outfit when nothing better is at hand.

The small doses of morphine should be repeated from time to time as deemed expedient. **We believe this superior to strychnine.**

In addition to what has been said don't allow any one with the patient, but the nurse, exclude all re latives, thereby reducing the chances for excitement to a minimum. The doctor and nurse should be alert and cool and make the patient feel that they are masters of the situation and everything is being done for him that science can do.

Nausea.—Nausea and vomiting are often distressing symptoms from which the patient may suffer after the operation. This is especially true with patients that have to be operated upon on short notice. They may have just finished a hearty meal. The intestinal tract may be loaded with debris and autotoxaemia just starting. While vomiting is primarily due to the anaesthetic yet we now and then see cases in which its persistence is due to sepsis and the presence of blood and bile in the stomach. In the paper referred to in the beginning of this article we advised the practice of washing out the stomach before the patient leaves there are good grounds for not doing it. Performed while the patient is still under the anaesthetic is a great advantage. It can be done thorough and the patient knows nothing of the procedure, which is very trying to many people. After the patient has come out of the anaesthetic and nausea is pronounced there are a few simple things that may be tried that often work wonders. These are the application of ice to head and neck, especially to the forehead and throat. The ice can be wrapped in towels, or towels can be wrung out of ice water. The application of a mustard plaster to the pit of the stomach or bits of cracked ice can be given to the patient; any of these may relieve the nausea or vomiting of your patient. Should you try the above and still your patient is nauseated give him a pint of tepid water to drink. Patients are glad to get this water even if it is warm and it will do one of two things, start the peristalsis normally downward or if rejected it clears the stomach of its poisonous contents. In the ordinary case, time is the only panacea and unless there are dangerous symptoms the less that is done by the surgeon, the sooner the patient will be relieved. The nausea will cease spontaneously when nature has eliminated the anaesthetic from the system; drugs like Oxalate of Cerium, Bismuth, Ingulvin, Creosote and a number of others, should not be given, they are liable to do more harm than good. You will see a case now and then, instead of the vomiting improving it grows worse. The retching is violent at first and a clear yellowish fluid is raised; as the case progresses the retching grows less violent and a few mouth fulls of dark green or black fluid is ejected with little effort—regurgitation. This occurs at frequent intervals and the contents spit is supposed to be bile, but chemical analysis shows that it is not bile, but extravisated blood. The cause of this condition is not clear or by any means settled, but the best authority on the subject (we can find), believe it is due to a septicemia that has so weakened the gastirc blood vessels as to permit the hemorrhagic transudation. The writer believes that it is due to a profound autotoxaemia. Let this be as it may the fact is, that **if prompt treatment is not instituted these patients die.** The question then confronts us, what can we do since medicines are of no avail. Use your stomach tube at the first symptoms of black vomit. You will find from a pint and a half to three pints of this fluid in the stomach; that which the patient was spitting up was only the overflow. Empty the stomach and wash it out with normal saline solution. Should this fail to improve the patient's condition try irrigation with a weak solution of Adrenalin. Should the toxaemia not be too pronounc-

ed you will save your patient's life.

Pain.—It is a very difficult matter for the surgeon to decide how much pain the patient really suffers; some make a great outcry over a very little pain, while others say but little when suffering intense pain. If the pain is only moderate the patient should be encouraged to bear it, but when excessive don't hesitate to relieve it. What drugs shall we prescribe? The bromides and coal tar derivatives are worse than useless, we are then driven to use some form of opium. Morphine in small repeated doses hypodermically is the treatment. This may lock up the secretions and mask some of the symptoms, but it is the lesser of the two evils. Some surgeons condemn its use in no uncertain terms, but the majority believe that in the hands of a competent physician, it not only brings relief and quiet to the patient, but in many instances becomes a life saver.

Purgatives.—Just how soon the bowels should be moved after an operation depends upon the nature of the operation and the patient's condition. When general or local peritonitis was so frequent after abdominal operations a large dose of calomel was invariably given as soon as the patient could retain it. This treatment has been proven to be actually harmful in the majority of cases. Occasionally a case will be seen in which unfavorable symptoms develop quickly, indicating that the case is going wrong, when a purgative is indicated and will do much good. To illustrate, a boy seven years old was operated upon for suppurative appendicitis. In twenty-four hours the pulse and temperature came down to normal; on the evening of the third day patient was in a splendid condition, bowels had been moved with an enema, abdomen was flat and patient resting nicely. On the following morning nurse sent for me hurriedly, on arrival I learned that the patient had rapidly grown worse during the night; temperature, pulse and respiration had gone up rapidly; abdomen was very tympanitic and in fact all the danger signals were displayed. I at once ordered 1-4 gr. calomel with aromatics every half hour, for six doses to be followed one hour later with a full dose of castor oil. In the actions that followed, there were eighty-six worms, the majority of them wound into two balls, the largest containing fifty-one big worms. The symptoms disappeared as if by magic.

Just here I want to give a word of caution, do not give purgatives by the mouth if the abdomen becomes badly swollen and tympanitic. In this condition enemata should be relied upon because the bowels are paralyzed from over distention and purgatives by the mouth will do no good and are likely to do harm. In the formulas for these enemata there is a wide difference of opinion, but the most effective are water and glycerine, turpentine and water, Epsum salts and water, and powdered alum one ounce, water one quart, as recommended by Dr. Hardon, of Atlanta. The writer has never tried this last formula therefore can not vouch for its value. Dr. McGuire recommends the human bile for this purpose when it is possible to secure it. Some authorities recommend high injections through a long rectal tube, but unless one is skilled in the passage of these tubes he had better not waste time with it. We have found a large size soft rubber urethral catheter attached to an ordinary household or fountain syringe to do the work very nicely if plenty of time is taken. The hips of the patient should be elevated by placing one or more pillows under them. If rightly done this method accomplishes good results and annoys the patient very little. In cases where the abdomen is not distended and the temperature and pulse is virtually normal there is no hurry to give a purgative. In these normal cases an enema can be given on the third day after the operation.

After this the bowels can be regulated by administering a mild laxative; mineral oil to which a small quantity of Flu. Ext. Cascara has been added will be found efficient.

Urinary Organs.—It is a wise procedure to look after the kidneys and bladder carefully for several days after an operation. Patients who have never voided in a bed-pan, will tell you they can not, but urging them to make every effort to do so, they will succeed. It is always wise to call their attention to this matter before the bladder is distended, because over distention will only add to the difficulty. Avoid the use of the catheter whenever possible, but if it becomes necessary use it under careful precautions. Should there be sudden suppression of urine you can almost of a certainty expect some grave complications; viz., acute Septicemia, Cholemia or chronic interstitial nephritis and unless prompt treatment is instituted your patient will die of uremia. Many things have been tried, sweating, cups over kidneys, the administering of digitalis infusion, and transfusion, but results have been poor. The best treatment known today, at least one that promises

much betttr results, is Arbutin gr. 1 every four hours, alternated with Spartine gr. 1, hypodermically every four hours. Don't forget to keep up elimination through the bowels and skin until kidneys respond to treatment. Copious enemas of decinormal salt solution are also beneficial. Don't forget to measure the quantity of urine voided and make frequent analysis for the first week after the operation.

Water.—It is a well known fact that an empty stomach is the best safeguard against nausea and vomiting. We also know that few things produce greater thirst than the berathing of ether or chloroform. It is sometimes pitiful the way certain patients beg for water after taking an anaesthetic and the more water you give them the more persistent the nausea. If, at the end of four to six hours after taking the anesthetic no vomiting occurs you can give the patient water in small quantities every thirty minutes, if this is well borne the quantity can be increased. The water can be acidulated, but cold slippery elm water is far superior. In certain cases where every thing fails to quench the thirst try hot water. I don't mean warm, but hot.

The After Dressing of Wounds—Every wound is a law unto itself when dressing is considered. Wounds that have been closed without drainage as a rule do not need dressing before the sixth day and many can be safely left until the eighth or the tenth when the stitches can be removed and a clean dressing applied. Should the dressing become saturated with secretion the wound should be dressed whether on the second or the tenth day. Pain is also an indication that a clean toilet is necessary. A rise of temperature should make the surgeon examine the wound. The formation of a stitch abscess may be responsible or an infected area may be found. Should you find a stitch too tight with a red area around it, clip and remove at once and in this way save the formation of an abscess. In treating open wounds and the stumps of amputated limbs never place absorbent cotton next to the wound, always cover with gauze first. Not long ago we dressed a large burn that had been dressed with cotton and we were mad enough to use language that would not sound well in Sunday school, to say nothing of what the patient had to suffer. Never put a gauze wick through and through the stump of a limb for drainage. We recently dressed a thigh stump in which the surgeon had placed a large gauze wick, leaving the ends out on either side. When we attempted its withdrawal the threads and meshes caught on the ends of the bone and we did have a time before succeeding. At one time we thought we would have to cut out a number of stitches before we could possibly succeed. We tried from first one side and then the other; and such suffering as that patient had to stand.

If you put in a drain of this kind, cut it in two, letting the ends meet in the middle of the stump.

Weak Cicatrix.—In operations on the abdomen, wounds that can be stitched up entirely seldom leave a weak cicatrix. Weak conditions of the scar, are generally the result of leaving drainage and necessitates the wearing of abdominal pads or belts to prevent hernia or other complications. The late practice of closing the operative wound and securing drainage through a stab incision has brought much better results in this respect.

This form of drainage is only possible in certain cases, and one thing should be remembered, that is, see that the drainage canal reaches the most dependent portion of the cavity. Also remember that operations on the lower abdomen are far more prone to leave weak points, through which hernias may occur; than operations in the upper abdomen on liver and stomach.

Erythema Nodosum.—Marfan, in The Medical Press, London, points out that erythema nodosum was formerly classed among the rheumatic eruptions with polymorphous erythema and rheumatoid purpura. These two conditions are now recognized as constituting two distinct and separate groups, and erythema nodosum has been shown to be a disease standing in some sort of relationship to an acute outbreak of pulmonary tuberculosis. Erythema nodosum occurs only in tuberculous subjects, usually in those in whom the infection is still latent. It is the outward and visible manifestation of slight, attenuated, curable tuberculosis, and is of bacillary origin. The histological structure of erythematous tissue is typical "tubercles." The cuti-reaction is positive in these subjects and the formation of an exactly similar nodule can be provoked by injecting a minute quantity of dilute tuberculin into the dermis. Erythema nodosum is, then, a bacillaemia which can, of course, be recovered from, but which is none the less an outbreak of bacilliary infection and must be treated as such.

SERPIGINOUS ULCER OF THE CORNEA.

By J. A. Kearney, M. D., Professor of Opthalmology, New York Polyclinic Medical School and Hospital, New York City.

Fewer cases of serpiginous ulcer of the cornea are seen in eye clinics today than heretofore because precautions are now being taken in a great many industrial plants to protect the eyes of the employed from injury.

This disease of the cornea is one of the gravest affections of the eye with which we have to cope. It occurs usually in the eyes of workmen following an injury that breaks the surface epithelium of the cornea and later on is infected by the diplococcus lanceolatus which is the same bacteria that produces croupous penumonia. A day or two following the injury there is severe pain in the eye intensified at night time. The defect is usually superficial and occurs about in the central portion of the cornea which early appears cloudy with margins that are greyish white or yellowish. One portion of the margin is more densely infiltrated than the others and progresses much faster because it contains greater masses of the pneumococci. In advance of the margin in the unaffected corneal tissue appear grey striae which consist of wandering leucocytes approaching the infected area. Hypopyon or pus in the anterior chamber forms early as the result of toxins produced in the ulcer that percolate through the cornea and irritate the irtic tissues and as a result leucocytes are extruded and collect in the bottom of the anterior chamber. These pus cells are sterile.

The appearance of the margins of the ulcer is the indicator of the severity of the existing condition and is also the guide as to the treatment that is necessary.

Through the endeavors of Roemer who founded the serum treatment for the ulcers of pneumococcal origin we possess a remedy to which many serpiginous ulcers respond without cauterization. The extent of the cauterization when this measure becomes imperative and the number of times it becomes necessary to employ it are greatly reduced when the serum treatments are being administered. There is always less hypopyon and seldom is it found necessary to do a section of the cornea for its release and the resulting corneal opacity is less dense when serum treatments are given.

The last two cases that were treated were seamen on fishing smacks. The history, appearance of the eye, course and treatment were about identical. A splinter flew into the eye while chopping wood on the deck of the vessel. The eye was irritable for two days following the accident but on the third day there was severe pain which was almost intolerable at night. On the fifth day he was examined in the clinic. The corneal defect was elliptical with the long axis at 180 deg. and occupied about the center of the cornea and was about the size of a semidilated pupil. The bottom of the ulcer was greyish and its margins were infiltrated and yellowish, the infiltrate of the nasal margin was thicker than the other portions and the cornea was slightly hazed a little in advance of this margin. Some hypopyon was present. Patients were sent to bed and ordered atropine and hot compresses. The same day by hypodermic 50 c. c. m. of pneumococcus serum of mixed stock was injected into the back muscles. At the end of the succeeding 24 hours the intense pain disappeared and after 48 hours the infiltrate in the margins was much less. Another similar hypodermic was given 48 hours after the first injection. After the second day the marginal infiltrate gradually disappeared and there remained but the defect to treat. There was only a slight haze in the corneal tissue after all active symptoms disappeared.

When an interne at Will's Eye Hospital many miners from the anthracite coal districts were sent in with serpiginous ulcer of the cornea the result of particles of coal bounding back into the eyes while using a pick to break up the boulders. Most of them were advanced cases. Serum treatments were not given then and the results were most disappointing. Nearly every case required more than one cauterization and few escaped corneal section. Many eyes were enucleated. When one was saved the resultant scar was leucomatous and unsightly. Since the advent of the serum treatment we approach these cases more hopefully. It is well not to rely too much upon its effect because we may still have conditions to meet that move our hands to heroic measures at times especially in advanced cases and at no time in the course of the disease should we lose close attention.

Clinically the serpiginous ulcer is not difficult to diagnose but nevertheless a smear should always be taken, stained and examined under the microscope for corroboration. The lancet shaped diplococcus when found leaves little doubt and

serum treatments as previously outlined should be begun at once.

Surprisingly few cases of serpiginous ulcer are found necessary to cauterize when serum treatment is given early. Advanced cases respond many times also but occasionally symptoms and eye conditions occur that compel cauterization. Rarely is it found necessary to enucleate the globe or to do a paracentesis of the cornea when the serum treatment is administered for a time.

Abdominal Pain in Chronic Amebic Enteritis.—Deglos (Paris Medical) says that in the chronic enteritis of amebic cases there may occur, apart from functional disturbances of the colon, and even when colonic involvement is not manifested by localized pain and contracture, symptoms due to dragging on the abdominal sympathetic, in particular the filaments from the solar and celiac plexuses, through the mesentery. These symptoms consist of sensation of discomfort, weight, dragging, and squeezing, referred chiefly to the lower epigastric and paraumbilical regions. At times the discomfort amounts to actual pain, accompanied by a profound malaise which reacts heavily upon the mental equilibrium of the patients, generally deeply affected when the disturbance is of long standing and marked loss of weight has occurred. While aerophagia and the resulting dyspeptic disturbances are rather frequent, the stomach should not be held to account for the symptoms just referred to. In many instances, as radioscopy indicated, enteroptosis, and especially transverse coloptosis, play an important role, assister, furthermore, by the accompanying more or less complete loss of abdominal fat. The treatment comprises, in the first place, a proper diet, with emetine and neosalvarsan. Measures should be taken to promote a gain in weight. Pain or discomfort are allayed by small doses of belladonna. To strengthen the abdominal muscles, often very weak, abdominal gymnastics, very gradually increased under the guidance of a convalescent, are indicated, e. g., raising the body or the lower limbs slowly from recumbency. These exercises should be carried out morning and evening, on an empty stomach, and followed by half an hour of complete rest. When the patient begins to get up, walk about, or work, a tight, broad belt of flannel or an elastic belt will greatly attenuate the discomfort resulting from the enteroptosis.

POSTURAL PAINS

By J. van Becelaere, M. D., LL. B., Consulting Helkologist, Detroit, Mich.

Pain, says the French authority, is "the prayer of nerves calling for a better blood-supply."

Anything, therefore, capable of interfering with the circulation, especially in limited areas, will cause pain. When someone inconsiderately steps on your best corn, thus increasing the abnormal pressure you "normally" subject it to, you naturally, and perhaps vigorously react to the pain incident upon the compression inflicted upon already anemic tissues at the point of your corn. When you wake in the morning with a feeling as if your every hair were a crokscrew, the differential diagnosis is easy: if accompanied with a dark brown-taste, lay it to the riotous jollification of the night before; if however the gustatory concomitant non est, yours is a case of scalp rheumatism, either from unnatural strain of the hair roots, due to abnormal compression of a twisted lock, or, in case your capillary adornment is conspicuous by its absence, to compression of the same portion of scalp by contracture a frigore; in either case the pathogenesis is the same: compression.

Lumbago (unless of a reflex nature and symptomatic of organic trouble), is due primarily to focal infection abetted by unnatural contracture; a strain, a twist cause a sudden pain that we attempt to relieve by muscular immobilization; involuntary, subsultant relaxation of the tetanized muscle causes a sudden pain (similar to those occurring from subsultus tendinorum in fracture), renewed immobilization, sudden muscular jerk, and a vicious cycle is established. This I know for a fact, and of personal experience: an observant mind learns from even inanimate teachers, and my rocking armchair has taught me quite a lot. For instance: by leaning back in this comfortable, deep-seated contrivance, especially with unsupported sacrum, I have found that I could easily develop a fine case of self-inflicted lumbago.

Another complaint which I traced to the same agency was a typical peri-arthritis of the shoulder, the pathogenesis of which I "doped out" as follows: when I had the said arm-chair made over, with an eye to increased comfortableness, I caused the arm-rests to be raised so as to afford increased support to the body, by transferring some of the weight to the perpendicular humeri, braced on the

elbows. The result however was an additional strain on the shoulder-joints, especially the anterior portion of the glenoid capsule. To relieve this tension, an instinctive contraction of the muscles came into play: first those at the back of the axillary region, the teres major and minor, and the subscapularis. Increasing discomfort caused unconscious transference of the strain to the deltoideus and finally to the other periscapular muscles.

By this time the entire shoulder was stiff and sore. As a consequence I soon learned to keep my elbows away from the arm-rests, and found relief from the pains.

Another mistake in my love for comfort was the adoption of a rather high foot-stool on which to rest my legs in a horizontal position. To this trick I attribute a similar painful condition developing about the left hip joint. Spending as I did hours of study in my arm-chair, and (by reason of illumination) with my body twisted to the right, it is small wonder that my right shoulder should be the most affected, and of course the left hip, though the left arm came in for a mitigated share of the same trouble, most probably because I tried instinctively to relieve my discomfort by transferring part of the strain to the other side. Still another important factor may have been that I was in the habit of staying for hours at a time in this really constrained position, before I knew better.

And now I come to another point that I have as yet failed to see noted anywhere. I mean the probable cause of coccygodynia, this most distressing condition which has too often, alas, been the cause of serious, expensive, and at any rate distressing operations. During the course of the preceding years I have been compelled by stress of business to portion off my spare time in driblets, taking as you might say my vacations on the installment plan; instead of the weeks or months at a time enjoyed by more fortunate confreres, I spent at least my Wednesday afternoons at the plebian movies, preferably rather toward the front of the house (on account of the vaudeville features), and here, because the stage was higher I was in the habit of sitting "on my back." Frequent repetition of this posture, the hardness of seats, the duration of the show, all contributed to bring about protracted compression of the coccygeal region with increasing tenderness that finally drove me to consult a professional friend, specializing in ano-rectal difficulties, for I was under the impression that I was developing cancer of the rectum. He soon set my mind at rest, however, and reported finding nothing more threatening than a couple of inflamed crypts, and that no neoplasm was to be discovered. How many poor people subjected to surgical mutilations, resection of the coccyx, the sacrum even, might have avoided surgery by merely shifting from a hard-seated rocker to an upholstered one I should hate to consider! Another set of patients come to the doctor with a history of lumbar pain on arising. They go from office to office, from doctor to doctor, from post to pillar, fill up on salicylates or the more fashionable aspirin, and get no better, just because the scientific practitioner has (as the Frenchmen say) "sought noon at fourteen o'clock," and failed to take a pensive slant at their anatomy. Nine times out of ten these are built more for comfort than for speed; carrying most of their bulk below the belt they are far from top heavy; on the contrary, their avoirdupois has a decidedly downward slant, and if you inquire you will find that they are "long sleepers," and that their sagging bed-spring is weak; prolonged persistence in a constrained—even if apparently comfortable—posture, with consequent pain on changing from the supine to the erect position. Extension of this lumbar pain to the abdominal wall is frequent, and often misconstrued into a sign of splanchnic trouble.

And if you go speculating into the possibilities of postural pains you will find that **flat-foot** is essentially a postural deformation, that most all cases of so-called rheumatism of the feet, ankles, legs and even sacralgia and persistent lumbago are no more than the direct results of unrecognized, and hence uncorrected, faulty postural habits.

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Leprosy in Brazil.—Figueria de Mello in a monograph recently published on leprosy and its prophylaxis states that the number of lepers in the State of Sao Paulo alone is between two and three thousand. Valverde reports the exact number as 2307. The State of Parana is the last to be visited by the scourge; there are now 400 lepers within its limits. In the State of Santa Catharina the disease is not rare. In regard to leper asylums there is a difference of opinion as to whether a maratime or terrestrial location is superior. In the campaign against leprosy notification and isolation must be compulsory.—Brazil-Medico.

PARESIS.*

By Jas. K. Hall, M. D., Richmond, Va.

Although in acute form syphilis is most wide-spread and damaging to the entire organism and more or less difficult of diagnosis, it is most disabling and the symptoms are still more vaguely related to their true origin when the disease has assumed chronic form. Chief among these chronic manifestations are tumors, tabes dorsalis, and paresis. Chief among these in consequent deterioration of the whole being, in the peculiar wreckage to self, to others, to individual and to corporate fortune, and in hopelessness of outlook, stands paresis. It constitutes a distinct disease entity, and no other malady, perhaps, brings about such complete havoc to the entire individual.

Paresis, dementia paralytica, or general paralysis of the insane, is an affection chiefly of the central nervous system characterized by inflammation and degeneration of the brain and cord and their investing membranes, manifesting itself by markedly increasing and disabling motor, sensory and mental phenomena. Without exception, it causes physical disability of some degree, and when fully established, the most complete mental disorganization. It has been estimated that, at present, there are confined in institutions in the United States probably no less than eight thousand paretics, and paresis is probably responsible for ten or twelve per cent. of all our insane.

For many years medical men were divided into two factions with reference to their belief as to the cause of paresis. One group asserted that the disease was always due to syphilis; the other group contended that syphilis played no essential part in the causation of the malady. Until recently, however, we were ignorant of the cause of syphilis, but in 1905 Schaudinn discovered the spirochete, and a little later Metchnikoff and others established its true relationship to the disease. Recently Moore and Noguchi found the same organism in the brain of paretics, and, since that time, paresis has been looked upon simply as a form of syphilis of the nervous system. Yet there remain about the malady many features not at all clearly understood. For instance, the disease in the South, at least, is comparatively rare in the negro, amongst whom we know syphilis is quite rife. It is true, too, that syphilitic women are much less liable to paresis than syphilitic men, and oftentimes we seem to have reason to doubt the value of the most active measures as preventive of paresis. But most of all are we puzzled to know why the syphilitic organism should lie apparently dormant in a seemingly healthy individual for a number of years and suddenly by unprovoked activity give rise to a rapidly fatal disease. We are wholly unable to understand, too, why only two or three per cent. of syphilitics become paretics.

The onset of a typical case of paresis is often so insidious that neither the patient nor members of the family realize that he is becoming impaired. Initial depression is not infrequent, with increasing irritability, forgetfulness, dreaminess, inattention, lessening powers of concentration, and an associated sense of increasing physical fatigue. The individual becomes noticeably careless in attire; the finer feelings gradually decay, he interrupts others in conversation without apology, tells lewd jokes, swears openly, and often becomes indifferent about the character of his associates. The most upright and moral citizen may undergo the most radical and distressing change in personality. Absolute abstemiousness, not infrequently, gives way to shameless drunkenness. The pillar of the church and the father of a large family may openly visit houses of ill-repute, or consort with women of low character. Grandiose delusions frequently develop. A clerk on a small salary may plan to build a great railroad, or to open a line of airships; wealth is spoken of in millions and trillions and quadrillions. Intellectual egotism is often unbounded; the man may assert that he is the smartest individual that ever lived; the Son of God, co-equal with Jesus Christ; the husband of Queen Victoria, the father of thoustands of children, the ruler of the universe; he was never born and can never die. Physical signs are not infrequently present even before the manifestations of mental disorder. In the beginning there are often to be found marked pupillary disturbances, contraction, unequal pupils, irregular margins and reaction to light and to accommodation may be sluggish or abolished.

In practically all cases of paresis there is pupillary disturbance of some kind. Late in the disease blindness is not uncommon. Tremors of the lips are often present; a certain immobility and an abnormal, ironed-out facial appearance develops during the course of the disease. The protruded tongue is often tremulous and awkward in its movements. Early in

*A lecture to the Junior class of the Medical College of Virginia, May, 1918.

the disease there may be difficulty in speaking certain words and a peculiar sing-song in the voice generally develops. At first, all the deep reflexes are likely to be increased; later they tend to disappear. Difficulty in co-ordinating finer muscular action is frequently noticed, both by the patient and by his friends. He buttons and unbuttons his clothing with conscious difficulty, and the handwriting becomes wavering and irregular, typifying visibly what the speech portrays to the ear. Associated muscles not only refuse to act in harmony, but increasing muscular weakness keeps pace with the deepening mental enfeeblement; the legs and the arms lose their ability to do what is expected of them, and sooner or later the patient is brought to bed, a mental and a physical wreck. Gradually the delusions subside, dementia increases, memory fails, words are forgotten, the faces of dear ones are no longer remembered; articulation becomes impossible, physical weakness, in spite of gluttonous eating, increases, and convulsions often occur. The patient cannot feed himself, he is unable to get out of bed, the sphincters lose their grip, unbelievable filthiness comes about, bed sores develop, and the patient has at last reverted completely to that kingdom of the lower animals from which all of us are said to be sprung. As a rule, within three years after the onset of the disease death mercifully terminates the distressing situation.

The so-called classical type of the disease, however, is not the only form it may assume; indeed, it is not the usual type. Often the first symptom to attract attention is a frank epileptiform convulsion. The individual while engaged in his usual work may fall down in a mere faint, and the unsuspecting physician may unguardedly attribute the synscope to over-eating, overheat, or to alcoholic indulgence, especially if its odor be present. A middle-aged man recently came under my care in early paresis in whom the first symptoms was an attack of fainting while he was at his usual duties. The diagnosis of epilepsy may be made, but epilepsy seldom develops in middle life, nor is fainting likely to occur for the first time at this period. Neurasthenia or nervous prostration, that medical blanket that covers a bed almost as large as hysteria, is another diagnosis sometimes made. Many of the early symptoms, too, justify thought of neurasthenia, e. g., the feeling of weakness, insomnia, loss of attention and concentration, forgetfulness and introspection, but such an error in diagnosis is extremely calamitous. Recently I have seen a man in whom diagnosis of nervous prostration was made two years ago, but in whom all the physical and mental manifestations of paresis developed, and in whom the blood Wassermann was found to be positive. The fact that he was a minister might have prejudiced the early examiner against the diagnosis of this disease. In paresis, developing in older subjects with hardening arteries, the trouble may be attributed to arterio-sclerosis. The term melancholia is sometimes mistakenly applied to the depressed form of the disease in its earlier stages. Dementia praecox showing itself for the first time at a rather late age may also cause confusion. Other organic diseases of the central nervous system may evoke symptoms simulating those of paresis. The early symptoms of the disease are so variable that the individual may present himself to this or to that kind of specialist, consequently it behooves every medical man to be on the alert for these symptoms, for it would be almost criminal to make a diagnosis of a benign condition when the real trouble is paresis—a disease until recently thought to be even more terrible than death itself.

Fortunately, one is no longer compelled to depend solely on the mental symptoms and physical signs for diagnostic data. Within the past few years, the pathologist has come to our aid. With associated physical and mental disturbances a positive Wassermann reaction of the blood serum or the spinal fluid points almost certainly to paresis. Likewise, abnormal increase of lymphocytes in the spinal fluid, or increase of globulin in the spinal fluid is significant. By one, or, better still, by all of these methods, the physician may be almost tempted to venture a diagnosis of paresis before the disease is clinically manifest.

Is paresis curable? Can it be prevented after syphilis has been contracted? The answer to the question of the curability of the established disease rests, as yet, in the language of Homer, on the knees of the gods. We do not know. Personally, I am quite doubtful. Is there any known method by which a syphilitic can be assured that somewhere between the ages of thirty and fifty he will not develop paresis? Even in spite of recent improvement in the method and the technique of treatment of syphilis, and in spite of the most vigorous and rational treatment of the disease in its earliest stage, no physician today is justified in assuring any syphilitic that he will not have paresis.

Since the specific cause of the disease is now known, however, it can be treated much more intelligently and the treatment can be controlled much more rationally than formerly. Salvarsan or neosalvarsan, in combination with the older methods, makes treatment much more satisfactory. The virulence of infection as indicated by blood serum and spinal fluid reaction enables one to measure dosage and frequency and length of treatment. When blood serum and spinal fluid that formerly gave a strongly positive Wassermann become negative one may think the infection has been eradicated but after a while both these fluids may give a positive re action again. The truth of the matter may be that syphilis is a disease rather easily controlled, but difficult to eradicate.

But of what use, one may well ask, is there in stressing the importance of the early recognition of paresis? Even if little may be done to stay the progress of the malady, much may be done to save the individual from himself, and to prevent him from doing irreparable damage to his possessions, to his family, and to his untarnished good name. The mental abnormality develops so insidiously that, as a rule, some overt act is necessary to cause an investigation of the mental status. Recently a man was sent to me because he stated very nonchalantly while purchasing a pistol that he intended to kill a certain neighbor. His subsequent behavior induced the belief that he would have executed his threat. A fortune may be squandered over night, shameless debauchery may be indulged in, character may be hopelessly damaged, and under the impelling influence of persecutory delusions, murder may be committed. A deluded paretic by his murderous assault undoubtedly shortened the life of Mayor Gaynor. Many a great corporation has been brought almost to ruin by an undiscovered paretic at its head. Every sufferer from this terrible malady, while unrestrained, is a menace to himself, to society and to his own reputation. Quite contrary to general opinion, the paretic is otfen suicidal. The sooner the general paralytic is taken in charge and dispossessed of management of his estate, the better it will be, not only for himself, but also for his family and his good name.

Upon what symptoms, you may ask me as I close, is the diagnosis of paresis based? I ask you to remember that, as a rule, the disease develops not until ten or fifteen years after the individual has contracted syphilis. Most syphilitics become infected at about twenty or twenty-five; consequently, paresis usually develops when the man is thirty-five or forty. The very first symptoms are apt to be those of mild mental depression, but the physician may not be called until subsequent excitement has developed. When called to see any man in middle life who is mentally abnormal always be on the watchout for paresis. Look for the physical signs of syphilitic damage to various parts of the body—notice the pupils. If they are changed in size from the normal; if they are unequal; or if the edges of the pupils are not smooth, then think of paresis. Frequently, in the earliest stages, the pupillary reaction to light is lessened or lost. The reaction to accommodation is generally retained in some degree. There are apt to be tremors about the lips and in the protruded tongue. Hard words like electricity and Methodist Episcopal may not be pronounced correctly. The knee jerks and the other deep reflexes are apt to be increased early, and lost late in the disease. Muscular inco-ordination will likely be exhibited by tremors in the finer movements—for instance, in writing and in buttoning the clothes, and in shaving. The patient is likely to handle himself awkwardly in walking, and in going up and down stairs. If these signs be accompanied by a positive Wassermann of the blood or of the spinal fluid, and if symptoms of mental abnormality of almost any kind are present, then the diagnosis of paresis will generally be justified.

Saccharomycosis.—Ribeyro in the Anales de la Faculdad de Medicina, after deploring the lack of interest in Peru in myotic affections—which seems strange in view of their prevalence in South America and of the amount of attention which they are receiving in tropical medicine—proceeds to relate a case of a rare form of mycosis until this possibility is disproved. The patient was a young woman of 22, eight years resident of Lima, never ill, and free from syphilitic taint, the Wassermann being negative. On December 4 she fell and hurt her lower lip. Iodine tincture was at once applied over the region and provoked a cheilitis for which a soothing ointment was applied. The condition became a permanent one, rebellious to all treatment. From the description the lips were the seat of a condition much like an obstinate eczema, swollen, red, edematous, and weeping.

SPANISH INFLUENZA AND SEQUELAE.

By C. G. Roehr, M. D., Fort Pierce, Fla.

The predisposing causes of Spanish influenza are insufficient and unbalanced diet, accompanied by excessive worry or mental depression which are direct results of the unsettled conditions due to the war. This explains why the epidemic is world wide.

Infection is favored by debility or decreased resistance, whether due to either physical or psychic causes. The variety of mixed infection now called Spanish influenza depends largely on such bacteria as will produce acids, whether grown in test tubes or in man. Acidosis is a term applied to acid excess in man. In almost all cases it is the mixed infection that causes serious symptoms.

The toxins and acid excess through interference with function, give us symptoms of extreme shock or local exudates.

These exudates in the lungs give us the high death rate from pneumonia. But acidosis is the predominating element that must be appreciated to avoid an even greater and graver danger in the future of the patient.

The unusual number of cases reporting frequent urination first drew my attention to the fact that we are now having an epidemic of acidosis. Examination showed that the urine was highly acid. Albumen and casts were often present. Some already have dropsy. Some showed hematuria, others with one or more of the symptoms of acidosis, including urticaria, puerpera hemorrhagica, neuralgia, neuritis, herpes, pneumonia. One patient complained only of a tired feeling. I found the urine acid, with albumen and casts. A blood slide, while under microscopic examination showed lysis, the red blood cells breaking up and dissolving as it cooled on the slide. This patient did not know that she had influenza.

Albumenuria is now so prevalent that in all probability we shall have a race of nephritics—cripples of the "flu," largely as a result of acid producing bacteria, developing in debilitated systems, due to unbalanced diet and extreme depression.

Although we may find only one of these symptoms in each patient, the acid excess in the urine with albumen and casts, is the condition which I wish to emphasize, as requiring appreciation and active treatment to prevent chronic Bright's disease, which will develop unless preventive measures are taken, causing years of suffering and incompetency, and in the end, resulting in a hundred deaths where pneumonia caused one.

I have found the use of alkalies essential, pushed or continued to the limit. Salol and soda as a bactericide, reaches the bacteria that generates the acid. In extreme cases I found polyvalent antistreptococcic serum reliable, when localization is in evidence.

I used influenza mixed bacteria with the certainty that when enough is used, it will give at least temporary immunity. Enough means from five to ten times as much as ordinarily used.

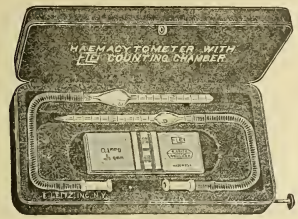
One per cent. (1) phenol, in doses of one to eight (1 to 8) drams, hypodermatically to equal five to ten minims per day, gave such good results that I shall continue to use it in severe cases. The limit of this phenol medication is to maintain slight carbol urea. The action of this remedy is positive. When used to this limit it will inhibit the growth of all known pathogenic bacteria.

The production of acidosis may be the formation of acid by the bacteria directly, or the bacteria may generate toxins which prevent elimination of acid, which would occur in normal function.

Wounds of the Ampulla of the Carotid.—Lefevre (Presse Medicale) notes that triple ligation of the common carotid and both its branches for extensive injury of the carotid amplla is attended with the same degree of risk as regards the brain as ligation of the common carotid alone, the condition may be spontaneously improved by reflux of blood through the external carotid into the internal carotid. Theoretically, anastomosis of the internal and external carotids seemed to Lefevre advisable, as in injury of the carotid ampulla necessitating the triple ligature or in ligation of the internal carotid alone, the risk as regards the brain would thus be reduced to that attending simple ligation of the common carotid. This procedure was actually carried out in a case of stellate wound of the ampulla, suture being impossible. The two carotids were joined in end to end suture by one layer of silk thread sterilized in vaseline. Ischemic paralytic manifestations were noted on the day after the operation, possibly because of kinking at the point of suture or a dressing too light around the neck. These were transitory, however, and when the patient left the hospital six weeks later, there remained only some diminution of power on the opposite side of the body.

HAEMACYTOMETER WITH ELEI COUNTING CHAMBER.

Standard of America. Made in U. S. A. Supplied With U. S. Bureau of Standards' Certificate, Upon Request.



With the manufacture of the ELEI Blood Counting Chamber, a step has been taken towards revolutionizing the construction of the "Thoma" pattern of Haemacytometer. Heretofore, the counting chambers were made of several independent parts, viz., slide with the supporting surfaces for the cover glass and the ruled disc mounted thereto.

The ELEI Counting Chamber combines slide and supporting surfaces for the cover glass into one, eliminating the danger of loosening.

The characteristic features of the ELEI Counting Chamber guarantee absolutely reliable results when counting blood corpuscles.

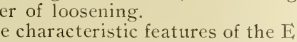


Fig. 2.
Vertical Section of Counting Chamber Demonstrating its Improved Construction.

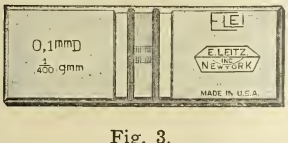


Fig. 3.
No. 18310. ELEI Counting Chamber with Single "Neubauer" Ruling.

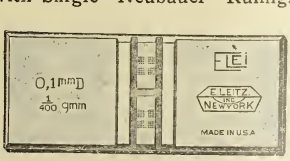


Fig. 4.
The ELEI Counting Chamber is unique in design and characteristic of the following features:

1. The construction entirely eliminates the cemented supporting surfaces for the cover glass and consequently the danger of the cement becoming loose. The ruled counting surface is attached in a most secure manner.

2. A new method in cutting the ruling increases its visibility when in contact with solution.

3. The ELEI Counting Chamber follows in its general construction the parallel form of cell as originally suggested by Dr. Buerker. This pattern facilitates a uniform distribution of the blood corpuscles over the ruled area, removing the atmospherical pressure upon the solution and thereby eliminating a change in its depth resulting in an increased accuracy of the count.

4. The ELEI Counting Chamber permits an easy cleaning as compared with other patterns.

5. The dull finish of the supporting surfaces for the cover glass causes a closer approximation between the cover glass and these surfaces than when two polished surfaces are brought in contact.

6. Since the supporting surfaces for the cover glass are elevated above the level of the slide, the cover glass can be attached and also removed without the least difficulty.

7. The ruled disc has been securely fastened to the face of the slide, eliminating all recessed grooves, which would naturally weaken the slide with the result of considerable breakage.

8. The ELEI Counting Chamber is guaranteed to conform to the specifications established by the U. S. Bureau of Standards, in regard to the spacings of the ruling, and the depth of the cell.

The tolerance of error as has been established by the U. S. Bureau of Standards, May 1, 1917, is as follows:

Error of length of side of the large square not to exceed plus or minus one per cent. equal plus or minus 0.01 mm.

Error in depth of chamber not to exceed plus or minus 2 per cent. equal plus or minus 0.002 mm.

The ELEI Blood Pipettes are made after a new method, resulting in a thoroughly reliable calibration and consequently offer the correct proportion of dilution.

The bulb or mixing chamber in its form is so arranged that the filling and mixing can be accomplished without the entrapping of air bubbles.

The ELEI Blood pipettes are guaran-

teed to conform to the specifications established by the U. S. Bureau of Standards with the tolerance of error of 3 per cent, in the principal interval.

Immediately after importations of Blood Counting Apparatus became impossible, we arranged for the manufacture of these instruments in this country; consequently, our firm is to be considered one of the first—if not the first—who developed the Haemacytometer, as an American product. **The ELEI Counting Chamber is offered by us as proof of the efficiency of our manufacturing department.**

The ELEI Counting Chamber, due to its extreme accuracy, establishes a new record of dependency in the counting of blood corpuscles.

The ELEI Counting Chamber provides for a rectangular disc of glass with ruling, the disc extending entirely across the slide between two parallel glass benches, being a part of the slide and which serve as support for the cover glass. Such a construction proves a distinct advantage over the original "Thoma" model which favors the circular disc, mounted in the center of a round chamber, cemented to the slide.

The parallel—open-form Counting Chamber has first been suggested by Dr. Buerker. It provides a more uniform distribution of the blood corpuscles than is obtained with the "Thoma" circular pattern, of which the chamber is entirely closed by the cover glass. Dr. Buerker has proven that atmospheric pressure does not effect the open and parallel chamber, and consequently does not alter the actual depth of the solution film when counting blood corpuscles.

The ELEI Counting Chamber avoids the cemented cell and consequently eliminates the danger of becoming loose, while in the "Thoma" model this takes place upon the balsam cement becoming dried out. The ELEI Counting Chamber uses special means in attaching the ruled disc so that the danger of its loosening is greatly reduced.

The parallel and open form of ELEI Counting Chamber facilitates the cleaning as compared with the "Thoma" circular pattern. The surfaces of the two glass benches, supporting the cover glass, are of a matt finish and thereby permit a closer approximation between these surfaces and the cover glass, than is offered, if two polished surfaces are brought in contact.

With the ELEI Counting Chamber, when the cover glass is placed in position, the ruled, rectangular disc remains 0.1 mm. beneath the lower surface of the cover glass. This construction allows the hollow space between the ruled surface and the cover glass to be filled by capillary attraction, after the cover glass is in position. By this method the chamber is filled when touching the rectangular, ruled disc under either edge of the cover glass with the tip of the filled diluting pipette.

Advantages of the Double ELEI Counting Chamber, Suggested by Dr. Buerker.
Fig. 4.)

While in general design, it corresponds to the single type, Fig. 3, it differs inasmuch as the rectangular disc is divided into two halves by a central moat. Each of the two halves carries a ruling and consequently the double Counting Chamber is provided with two rulings. One of the rulings serves for the counting of red, while the other for the counting of white blood corpuscles. Both counts can be carried out at the same time without the necessity of cleaning and refilling the Counting Chamber.

Many leading laboratories give preference to this type of chamber, while the U. S. Army Medical Department has adopted same as standard and places orders for large quantities.

Iritis and Cyclitis in Dysentery.—Maxwell and Kiep (British Jour. Ophthal), observed 6 cases all from the Mediterranean area, the subjects of infection with Bacillus dysenteriae (Shiga), who developed iritis or cyclitis. They conclude that patients suffering from an infection by this bacillus may ocasionally develop anterior uveitis as a result of this infection, as pointed out by Morax. The ocular infection may or may not be accompanied by articular manifestations. These affections would appear to ocur most frequently about a month after the first signs of involvement of the bowel, but may occur as early as the twelfth day. The articuo-ocular syndrome corresponds exactly to that occuring in another infection of a mucous tract, viz., gonorrhea, as pointed out by Garrod.

Chancroid of the Vagina.—Courtade reports two cases of this rather rare localization; this infrequency may be only apparent, for unless the speculum is used in routine work one can never be certain of their absence.—Annales des Maladies Veneriennes.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

HIGHER SALARIES FOR MEDICAL MEN IN THE EMPLOY OF THE STATE.

Shortly after the war began there was a concerted move among the teachers of the schools in North Carolina to secure a raise in the miserable pittance paid them for their responsible and important work. In their demands for higher salaries, the efforts of our educators met with our hearty commendation, and we are pleased to note every indication in the temper of the press of the state, and the bills being introduced in the present legislature, a strong disposition to accede to their more than just requests, as well as to increase the pay of judicial and other state officers. Certainly salaries of officers, like fees of all the professional classes in this, and other Southern states, are far too low, and coincident with the increased cost of living, and the far higher prices paid for unskilled labor of every kind, it is only just and right, salaries of teachers, public officials, as well as the fees of the professions in general, should be increased.

An intelligent perception of the trend of things in general, as well as a due appreciation of the augmented cost of living, and the increasingly larger demands made up them, will we take it, naturally cause the medical men of the state to see to it that they receive a proper proportionate greater sum of money for their services. That people should naturally expect, in these times of a lowered in valuation dollar and an increased living cost, to requite their doctors to a greater degree, we doubt not, and with simply offering the suggestion, we venture to add, that the doctor who fails to collect more for his services than he did two or more years ago, is simply cheating his family and setting a bad example to the junior members of the profession.

In this connection, it should be remembered that the various health officers from the secretary of the state board of health down to the humblest local sanitary officer, is being paid salaries based on pre-war living conditions and hence worthy of, and demanding early revision. That Dr. W. S. Rankin, the capable and efficient Secretary of the state health activities of North Carolina is serving his state and people on a salary possibly half as great as he could command in other places which have at different times been open to him in the past few years, is known to members of the medical profession, but the public generally should become aware of such fact, and the legislature now in session should make possible the paying of him a salary more commensurate with those paid in other states, and in at least a partial proper relation to what other states would gladly give Dr. Rankin to leave his North Carolina job and take up his magnificent health campaign in other states. North Carolina legislators are as a rule, thoughtful, deliberate, and fair in their considerations of such propositions, and we feel before the present body has adjourned and its doings passed into history, such measures will be enacted into law. But it is not only here at the capital, but in county and municipal bodies that similar changes in salaries should be made. Many capable medical men are serving their home cities, counties, and communities at a rate of wage altogether inadequate to the value of the services rendered, and now is an opportune time for medical officials serving in the many places in the state to ask that their wage be increased. No false sense of personal modesty, or consideration of the possibility of the county or municipal board securing some other at a less rate, should deter health officers and their freinds, from properly presenting this subject to those in authority as well as developing a public sentiment that will see that simple justice is done in the premises.

WHAT GENERAL PERSHING SAID OF THE MEDICAL CORPS OF THE U. S. ARMY.

Secretary of War Baker in a supplement to his annual report to the President and Congress makes public General Pershing's report to him of the military operations of the American Expeditionary Forces from organization in May, 1917, to the signing of the armistice, November 11, 1918. In that report General Pershing said relative to the Medical Corps "Our Medical Corps is especially entitled to praise for the general effectiveness of its work, both in hospital and at the front. Embracing men of high professional attainments and splendid women devoted to their calling, and untiring in their efforts, this department has made a new record for medical and sanitary ef-

ficiency." When these fine words of commendation are read, and one recalls the hundreds of officers, enlisted men, and nurses of the Army Medical Corps, who were trained and developed as army workers in the big Base Hospital at Camp Greene, Charlotte, N. C., a feeling of genuine pride of accomplishment thrills us and a fine feeling that those who quietly remained, under orders, on duty in the base hospitals of the army on this side of the water, were, when preparing the splendid men and women who went across, fully doing their duty and contributing their bit in helping to "beat the Hun."

Truly, in the language of that great sea-fighter of the Spanish-American War, Admiral Winfield Scott Schley, "There is glory enough for all," and it is fine to know that the work of the medical profession has in the present war surpassed that of all previous wars, and as such has won merited recognition from those best fitted to judge.

TRANSACTIONS MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, 61ST ANNUAL SESSION, PINEHURST, N. C., APRIL, 1918.

The handsome annual volume issued by the Medical Society of the State of North Carolina has recently reached the membership after many and wearisome delays only fully appreciated by those duly mindful of the sometimes devious ways of printers and the embarrassed conditions under which all work of this character was performed during war times. While it is certainly to be regretted that we should be within sixty days or less of the annual session again, ere the volume recording the doings of the last session is available to the membership, the transactions volume is a fine one, in every way up to the standard established, and takes its place on the shelves of the Carolina doctor as a worthy companion to the many excellent ones preceding it in past years.

The efficient secretary, Dr. Benj. K. Hayes, entered the U. S. army in the early summer of 1918 before it was feasible to complete the preparation of the volume, or even start its publication, and the duties incident thereto was placed in the capable hands of Dr. L. B. McBrayer who has discharged the responsibilities entailed with his usual capacity and afithfulness.

THE ROANOKE (VA.) ACADEMY OF MEDICINE.

A report of what the Roanoke Academy of Medicine has done for the last year by Dr. E. P. Tompkins, who has kindly given us this information. Due to the epidemic of influenza prevailing the past few months, as well as the extra work put upon those remaining when a large per cent. of the membership entered the army and navy service, the attendance has not been as good as might be desired and very much less than at former sessions.

However, the papers presented have been valuable and have been appreciatively heard and discussed. A short review of the events of the past few months may be found of interest.

Dr. W. Brownley Foster was elected President at the earliest fall meeting and Dr. Tompkins re-elected Secretary. After holding this office for two and one-half years however, he resigned to be succeeded by Dr. R. L. Mason.

Amongst the essays presented may be mentioned the following: Dr. L. G. Pedigo made an extended address on various features of his experience at Tone's Creek, where he went to aid the coal miners in the employ of the V. I. C. & C. Co., during the influenza epidemic. He mentioned their proclivities in the way of "staying out of bed to fight it off" with sometimes disastrous results. He advocated "sedative doses" of calomel. "The Eye Lessons of Influenza" claimed the attention of one meeting, being presented by Dr. H. B. Stone. He went quite fully into the matter speaking largely extempore. His talk evoked liberal discussions and frequent questions.

Dr. John W. Preston's dissertation took up several matters, not directly in line of medicine, but relating thereto, such as tabulation of practical nurses to fill a demand for which not enough graduate nurses are available, and the instruction of these nurses by physicians. Also instruction of the public in their relation to the profession in this time of special stress. Dr. E. P. Tompkins reported case of diabetes with a specific gravity of 1052. Dr. T. D. Armistead spoke in detail of a case of influenza with a multitude of complications and sequelae. Dr. E. E. Watson read a paper entitled "Tuberculosis and Pregnancy" in which he gave valuable instructions. Dr. M. R. Faville held the close attention of his hearers in the discussion of whether or not to remove tonsils in singers. He reported two cases

of which the results were not satisfactory, as he expressed it, the richness of the over tones being diminished after tonsil lectomy.

IGNORANCE OF MENTAL DISORDERS AMONG THE SOLDIERS.

Among the many other facts brought out by the war is the woeful ignorance of mental disorders among general practitioners. And this ignorance is costing the United States Government hundreds of thousands of dollars. Here is the reason. The draft boards of the country either did not recognize the mentally unfit when they saw them, or else they carelessly permitted them to be drawn for service.

Now, if there is any earthly occupation which reuires not only a certain degree of intelligence, but, even more important, a stable mental equilibrium, it is that of the soldier. The soldier must adapt himself to a dreary round of routine, doing the same things day after day. He must become more or less of an automaton, being always at the beck and call of his superiors, and must obey their commands explicitly, without regard to his own judgment or his personal pleasure. He knows practically no privacy, and is one of so many thousands of other men, doing the same things, at the same time, in the same way, wearing the same garments, eating the same food. If he is of sensitive nature, he must bear the gibes and horse-play of the rougher element. He must do without many of the creature-comforts to which he was accustomed in civil life.

These are but a few of the stresses which are brought to bear upon him in camp, and of course there are the infinitely greater stresses of the firing-line. To be able to adapt to these conditions implies the presence of a healthy mental equilibrium such as no small percent of us lack. Another element in the drafted man's case is the fact that he so often is compelled to become a soldier against his real desires.

Given these facts, it is plain to be seen that those of unstable mental make-up must eventually become unequal to the performance of their tasks, and since most men are unable to acknowledge to themselves that they are failures, the result is one or another variety of mental disorder, which serves the useful purpose of removing the individual from the service, but adds to Uncle Sam's hospital cases so many more patients to care for, and as a rule these cases must be discharged from service, but require treatment for periods much longer than the physically wounded.

But these mentally unfit cases should not be permitted to enlist or be drafted. Many of them can be recognized if carefully observed. There is no excuse for drafting high-grade imbeciles or beginning paretics—but it has been done many times. An elementary knowledge of neurology and psychiatry, including some simple intelligence tests, will permit the exclusion of the major portion of unfit cases.

And it behooves not only the physician on the draft board to have this knowledge, but every physician who desires to be to his community what a physician should be. Few physicians recognize the psychic element at the basis of so many of their cases, including no small proportion of physical disorders, and the man who does not recognize this element is failing in his duty to his patients, and to society at large.

L. E. D.

The Health of the German Woman.—A writer in La Presse Medicale discusses this subject on a basis of data obtained from miscellaneous sources. What is true of the German woman applies even more strongly to the women of some of the overrun border countries—Poland for example. The first topic for discussion is emaciation from underfeeding. It was shown of certain women of Warsaw that they received daily but 1,400 to 1,800 calories. As a result the melting away of the fat of the lesser pelvis and abdominal cavity caused enteroptosis, chiefly in the form of nephroptosis. Other ptoses as those of the liver and stomach were sufficiently evident and good opportunities for palpation of viscera were plentiful. The broad ligaments relax and the perineum follows; the gynecologists perform prolapse operations nearly fourfold as frequently as before the war. War amenorrhea or rather amenorrhea in general is sevenfold more common; or, in other words, 7 out of every 100 women who should menstruate are unable to do so. Many believe themselves pregnant and some even have milk in the breasts. These cases will doubtless recover as soon as life becomes normal. The proportion of male births certainly increases, being now 116 to 100 girls, with a maximum of 122 to 100 in some statistics. Whether the predominance is a teleological phenomenon to offset the male deaths or a mere result of underfeeding must be left to the readers' own judgment.

EDITORIAL NEWS IETMS

In this issue appears an editorial entitled "Ignorance of Mental Disorders Among the Soldiers." Dr. Duval is associated with me in the editorial writing of this Journal and the following letter will, in a way, explain itself:

St. Elizabeth's Hospital,
Washington, D. C.,
February 1, 1919.

Dr. E. C. Register,
Charlotte, N. C.,

My dear Dr. Register:

Your letter of the 28th inst. is at hand, inquiring as to my reasons and arguments in the editorial which I sent you I asserted that the draft boards were careless in regard to the examination of the mental conditions of the men whom they examined, apparently many of them thought that if a man was physically healthy he was a fit subject for the army—regardless of his mental condition. I do not say that this is universally true of draft boards; I am speaking only in general terms. The two following cases are illustrative of the glaring mistakes made by some of these boards.

The first case, which has been widely quoted, was that of a drafted man, who was placed under mental observation because of the fact that he could not keep step while drilling. After being examined by several army men, it was finally ascertained that the man was a low-grade imbecile with a mental age of five years. This man had, prior to the time he was drafted, been cared for like any five-year-old boy. He was unable to tell where he lived, was unable to make change, or even to run common errands.

The second case was that of a young colored man who was drafted and placed on duty as sentry, guarding a region from which the military authorities were attempting to exclude vice. This man saw a couple approaching the prohibited area and shot both of them dead. He was unable to give any adequate reason for the shooting. Mental examination showed his mental age to be nine years. The shooting was apparently done on the impulse of the moment, the man not understanding what procedure he should take—and probably more or less panic stricken.

It is easy to comprehend the enormous opportunities for harm, which may come from enlisting such cases as the above. There is no great difficulty in detecting feeble-mindedness, and no excuse for passing such cases into the service. The other forms of mental disorder present more difficulty in detection, but this is no reason why the draftees should not have been examined carefully, to exclude these disorders.

Leaving the subject of the draft-boards, and passing on to that of the general practitioner and mental medicine, I have no hesitancy in saying that the average general practitioner's ideas on this subject are little more advanced than those of the layman. Occasionally one finds a general practitioner, of the more advanced type, who has a fairly good elementary knowledge of psychiatry. Many of them fail to recognize the large psychic element in cases which come to them for treatment of physical disorders. (If desirable, I can enlarge the foregoing sentence into an editorial.)

You are at liberty to insert any of the above material into the editorial which I sent you. None of the assertions contained hereon are in the least exaggerated, but are founded on extensive observation of drafted soldiers sent to this institution.

I understand that my name is not to be used in connection with the editorial. This would be inadvisable on account of my connection with a Federal institution of more or less prominence.

Trusting that the above answers your questions fully, I am, very respectfully,

LEON E. DUVAL, M. D.

Dr. W. H. Braddy, who has been practicing in Greensboro, N. C., for about ten years, has moved to Graham where he will be connected with the new hospital which is being organized there. Dr. Braddy is a well equipped physician and no doubt will do well in Graham.

Lt. Col. Jno. W. Long, M. C. U. S. army, Greensboro, N. C., one of Carolina's best known and skilled surgeons has returned from Paris where he has spent some time on detached service, and resumed practice in his former home. In addition to having been adviser to Gov. T. W. Bickett for some months following the outbreak of the war, Dr. Long was most active in the organization of Hospital Unit No. 65 which was composed chiefly of N. C. physicians and nurses, and while the unite was ordered into active service and sent across under another commanding officer, its conception and promotion was due to Dr. Long.

The unit still remains in the army service on the other side.

PRELIMINARY PROGRAM.

Twenty-First Annual Session Tri-State Medical Association of the Carolinas and Virginia, Richmond, Va., February 19-20, 1919.

OFFICERS—SESSION 1919.

Dr. Robt. S. Cathcart, Charleston, S. C.—President.

Dr. Douglas VanderHoof, Richmond, Va.—Vice-President.

Dr. L. A. Crowell, Lincolnton, N. C.—Vice-President.

Dr. Francis A. Coward, Columbia, S. C.—Vice-President.

Dr. Rolfe E. Hughes, Laurens, S. C.—Secretary-Treasurer.

EXECUTIVE COUNCIL

One Year Term.

Dr. Jno. N. Upshur, Richmond, Va.
Dr. J. Howell Way, Waynesville, N. C.
Dr. Julius H. Taylor, Columbia, S. C.

Two Year Term.

Dr. E. G. Moore, Elm City, N. C.
Dr. A. L. Gray, Richmond, Va.
Dr. W. W. Fennell, Rock Hill, S. C.

Three Year Term.

Dr. R. C. Bryan, Richmond, Va.
Dr. E. C. Register, Charlotte, N. C.
Dr. F. H. McCloud, Florence, S. C.

Reporter—Miss Ida Lamb, Charlotte, N. C.

CHAIRMEN OF SECTIONS

North Carolina.

Dr. Eugene B. Glenn, Surgery, Asheville, N. C.

Dr. E. C. Register, Medicine, Charlotte, N. C.

Dr. Henry H. Kapp, Gynaecology, Winston-Salem, N. C.

Dr. W. L. Dunn, Obstetrics, Asheville, N. C.

Dr. E. Reid Russell, Eye, Ear, Nose and Throat, Asheville, N. C.

South Carolina.

Dr. Geo. H. Bunch, Surgery, Columbia, S. C.

Dr. Harry L. Shaw, Medicine, Sumter, S. C.

Dr. A. E. Baker, Gynaecology, Charleston, S. C.

Dr. Fletcher Jordan, Obstetrics, Greenville, S. C.

Dr. E. M. Whaley, Eye, Ear, Nose and Throat, Columbia, S. C.

Virginia.

Dr. Southgate Leigh, Surgery, Norfolk, Va.

Dr. Alex. G. Brown, Jr., Medicine, Richmond, Va.

Dr. Marshall J. Payne, Gynaecology, Staunton, Va.

Dr. M. Pearce Rucker, Obstetrics, Richmond, Va.

Dr. Jos. A. White, Eye, Ear, Nose and Throat, Richmond, Va.

COMMITTEE OF LOCAL ARRANGEMENTS.

Dr. J. Allison Hodges, Chairman; Dr. J. A. White, Dr. H. M. Taylor, Dr. C. R. Robins, Dr. R. C. Bryan, Dr. J. N. Upshur, Dr. M. O. Burke, Dr. A. L. Gray, Dr. A. M. Willis, Dr. Virginius Harrison, Dr. T. W. Murrell, Dr. C. V. Carrington, Dr. B. R. Tucker.

PRELIMINARY PROGRAM.

Wednesday, Feb. 19, 10 a. m.

Place of Meeting—Auditorium, Jefferson Hotel.

Society will be called to order by Chairman of Committee of Arrangements.

Divine Invocation—Dr. Russell Cecil.

Address of Welcome on Behalf of the State and City—Gov. Westmoreland Davis.

Welcome Address on Behalf of Profession—Dr. Virginius Harrison.

Response—

President's Address—Robt. S. Cathcart, Maj. M. C., U. S. A., Charleston, S. C.

"The Medical Profession and the Great War."—Dr. Jno. N. Upshur, Richmond, Va.

"The Results of Prostatectomy at the Present Time, with Brief Report of One Hundred Consecutive Cases with One Death."—Dr. A. J. Crowell, Charlotte, N. C.

"Supra-Public Prostatectomy (lantern slides)."—Dr. Robt. C. Bryan, Richmond, Va.

"Hydataform Mole—Report of Case."—Dr. J. E. Rawls, Suffolk, Va.

"The Antrum."—Dr. Antoneo A. Burke, Norfolk, Va.

"Fundamental Causes of Habit Diseases and Attendant Neuroses."—Dr. W. C. Ashworth, Greensboro, N. C.

"Criminality and Mental Abnormality."—Dr. J. K. Hall, Richmond, Va.

"Vaccine Therapy."—Dr. C. A. Shore, Raleigh, N. C.

Dr. J. W. Halford, Lillington, N. C.—Subject Unannounced.

"How to Study Syphilis."—Dr. Jno. E. S. Davidson, Charlotte, N. C.

"Cinchona."—Dr. W. T. Parrott, Kinston, N. C.

Dr. Clifton Miller, Richmond, Va.—

Subject Unannounced.

"Neurological Work at the Front—With Pictures."—Dr. Tom A. Williams, Washington, D. C.

"Some Studies on the Thyroid Gland."—Dr. E. H. Bowling, Durham, N. C.

"Myocardial Hydrothorax."—Dr. Alex. G. Brown, Jr., Richmond, Va.

"Some Personal Observations as to Causes, Course and Treatment of the Asthmas."—Dr. A. McNiel Blair, Southern Pines, N. C.

"Salivary Calculi—Report of Two Cases—with Lantern Slide Demonstration."—Dr. Douglas VanderHoof, Richmond, Va.

Dr. A. E. Baker, Charleston, S. C.—Subject Unannounced.

Dr. Chas. R. Robins, Richmond, Va.—Subject Unannounced.

Dr. John A. C. Gerster, New York City, Invited Guest.—Subject Unannounced.

"Importance of Immediate Perineal Repair."—Dr. Virginius Harrison, Richmond, Va.

"The Etiology and Treatment of Dysmenorrhea."—Dr. Stuart Micheaux, Richmond, Va.

"Meningitis."—Dr. Gerald C. Parker, Norfolk, Va.

"Treatment of Sexual Impotence."—Dr. Stanley H. Graves, Norfolk, Va.

"Some Important and Often Unrecognized Anal Pathology."—Dr. E. H. Terrell, Richmond, Va.

"The Pre-operative and oPst-operative Treatment of Cancer with Radium."—Dr. A. M. Willis, Richmond, Va.

"Treatment of Fractures of the Femur with the Hawley Fracture Table—with Lantern Slides."—Dr. S. S. Gale, Roanoke, Va.

"Thrombus, Resulting in Gangrene, a Sequel to Influenza—with Report of Cases."—Dr. J. F. Highsmith, Fayetteville, N. C.

"Transfusion Simplified."—Dr. J. H. Culpepper, Norfolk, Va.

"Some of the Nervous and Psychic Effects of Influenza."—Dr. J. Allison Hodges, Richmond, Va.

"Salpingitis Versus Appendicitis."—Dr. Southgate Leigh, Norfolk, Va.

"The Pre-operative and Post-operative Treatment of Cancer with Radium."—Drs. Murat Willis and S. W. Budd, Richmond, Va.

INFORMATION.

Richmond is amply supplied with hotels:

The Jefferson (Headquarters), $2.00 up.
The Richmond, $2.00 up.
Murphy's Hotel, $1.50 up.

Special attention wil lbe given ladies visiting the convention and they are urged to attend. Mrs. A. L. Gray, of Richmond, will head the Ladies' Entertainment Committee.

Surgeon Generals Blue of the Public Health Service, and Ireland of the Army are expected to be present and address the Society on matters of great importtance at this time.

A number of our own men returning from overseas and the camps in this country will give interesting talks on military surgery and medicine, as well as public health, and certainly no more important meeting of the Tri-State has ever been held.

Authors who will need lanterns to demonstrate their papers will please write Dr. Alfred L. Gray, of Richmond, who has this part of the meeting in charge.

Space will be rented exhibitors of ethical goods. Those desiring such advertising will address Dr. Thos. W. Murrell, Richmond, Va.

The arrangement of papers on final program will be such as to group kindred subjects and as nearly as possible comply with wishes of authors.

Please notify the Secretary at once of errors or omissions on this program. Others intending to read papers will send title immediately.

Sec. 9: "Not more than twenty minutes shall be occupied in reading any paper, except by a vote of the Association. In the discussion of papers, resolutions or questions, no member shall speak longer than five minutes, or more than twice on same subject, except on special permission by a vote of the Association."

For further information address Dr. J. Allison Hodges, Richmond, Va., or Dr. Rolfe E. Hughes, Secretary, Laurens, S. C.

R. S. CATHCART,
President, Charleston, S. C.
ROLFE E. HUGHES,
Sec-Treas., Laurens, S. C.

Dr. H. P. Barrett of the Charlotte Sanatorium, has been elected bacteriologist by the city commissioners to fill the position made vacant by the transfer of Lieut. L. R. Jones of the United States public health service. Lieutenant Jones will go to Camp Bragg, Fayetteville, N. C. Dr. Barrett will continue his work at the Sanatorium and will devote only part of his time to the city health department.

THE PHYSICIAN.*

Ensign of a noble mission
Battling with disease and pain,
Bearer o fthe healing lotion,
Striving to make whole again.

Mercy's own high priest in action,
Bearing, braving, carrying on,
Strive that broken lives be mended,—
That blind eyes again see dawn.

You, the torn and tortured victims
On the stretchers and the cot,
Served and forced your weary body
To serve on when strength was not.

Steady was the keen edged knife stroke
In that wondrous kindly hand
Mending helpless human dereilcts,
With the knife, the splint, the hand.

All your manhood's strength was given
Throbbed with pity your great heart,
For the shattered ones unerring
Wrought with your consummate art.

"Others first," was e'er your watchword,
All your soul was thus poured out,
All the way to the long roads ending
'Mid the wrack and battle shout.

You have laid on Freedom's altar
Service. valorous. sacrifice
At the front with bomb and sharpnel
Played the game with Death's own dice.

Symbol of the Great Physician.
Who has brethren healed long since—
Sick and blind and lame and halting—
Be from Him your recompence.

MARY QUINN HARRILL.
Marshville, January 28, 1919.

*Dedicated to Capt. W. M. Scruggs, M. C. U. S. Army, of Rutherfordton, N. C., one of Carolinas fine young men and able surgeons now on duty with the A. E. F. in France.

Health Department of Richmond, Va.—Dr. E. C. Levy, former chief health officer of Richmond, has been appointed director of public welfare in that city, a new office created in the city's changed form of government. Dr. Levy was for many years chief health officer of Richmond, but recently he had been engaged in public health work in New York City. About a year ago he entered the army with the rank of Major serving as an epidemiologist.

Capt. C. J. Ellen, M. C. U. S. Army, formerly of Greenville, N. C., and for more than a year and a quarter past, attached to the Base Hospital Staff at Camp Greene in the departments of Otology, Laryngology and Ophthalmology has retired and resumed the practice of his specialty at Greenville, N. C. Captain Ellen during his army career established an enviable reputation as a skilled operator and a surgeon of discriminating judgment, besides becoming favorably known as a first-class officer with a very clear conception of the special duties incident to a doctor's service in the army.

A recent card reads as follows:

"**Dr. Clyde F. Ross** announces to the profession that he is now located in the Professional Building, Richmond, Va., for the practice of Genito-Urinary Disease exclusively."

Dr. Ross prior to the war was a well known and popular physician of Anderson, S. C., volunteering early he became Chief of the G.-U. Service in the U. S. Army Base Hospital, Camp Greene, Charlotte, N. C., where he remained on active duty until after the signing of the armistice when he removed to Richmond, Va. Captain Ross is most pleasantly remembered by his associates in the army and citizens of Charlotte among whom he resided for a year and a half, and their good wishes accompany him to his new home. A capable and indefatigable worker, an enthusiast in his line, success will come to him.

The Lynchburg County Medical Society of Virginia, we understand has had a very successful year. At its December meeting held in Lynchburg, the following officers were elected: President, Dr. John W. Dillard; Vice-President, Dr. Robt. P. Kelly; Secretary-Treasurer, Dr. E. F. Younger. The work done by this society during the past year was devoted chiefly to meetings in connection with the war business and visits of a few prominent members of the profession from other cities. About thirty-three and one-third per cent. of the members of this Society joined the Medical Corps of the army.

Dr. T. V. Goode, of Rutherford College, died January 14th. He was the father of Dr. Vance G. Goode, of Morganton who is Secretary of the Burke County Medical Society. Dr. Goode graduated in 1893 at the Kentucky School of Medicine. He was fifty-five years old. Before he moved to Rutherford College about 14

years ago, prior to that time he practiced at Cherryville, N. C. He was considered a good physician and Christian gentleman.

The Granville County Medical Society of North Carolina at its December meeting elected the following officers:

President—Dr. Joseph A. Morris, Oxford, N. C., R. F. D.

Vice-President—Dr. Samuel H. Cannady, Oxford, N. C.

Sec.-Treasurer—Dr. W. B. Bullock, Oxford, N. C.

Representative to House of Delegates—Dr. T. L. Booth, Oxford, N. C. Alternate, Dr. G. T. Sikes, Oxford, N. C.

The Davidson County Medical Society has ended a very successful year with its December meeting. At its December meeting, the following officers were elected: President, Dr. E. J. Buchanan, Lexington; Vice-President, Dr. J. E. Nobgood, Thomasville; Secretary-Treasurer, Dr. E. F. Long, Lexington; delegate to State Medical meeting, Dr. D. J. Hill, Lexington; alternate, Dr. C. A. Julian, Thomasville. The organization in Davidson county includes every licensed white physician in the county. A moderate increase in the fee scale was adopted at the December meeting. A distinct improvement in the morale of the organization has been effected in the last three years. The meetings are well attended and the discussions mutually helpful. The County Medical Society stands squarely behind the department of health and has been a powerful instrument in affecting sanitary and hygienic reforms, as well as making the quarantine regulations an effective unit.

The Neglected Therapy of Convalescence

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

Hemeralopia in Soldiers.—Danis, in the Archives Medicales Belges, says that this subject seems to be a very ancient one and a record of it is found in the thirteenth century in connection with the Crusades, when members of the expeditionary force of Jean de Brienne suffered from night blindness while in Egypt, and at the capitulation of Damietta in 1221. The historians next find the affection mentioned in 1798 and curiously enough again in Egypt in Napoleon's army. It was also seen at about the same period at the siege of Malta. The besieged were the ones who suffered. The next mention appears to be in Russia in 1812, the author supplying no details. The affection was noted in the French expedition to Algiers in 1838 and again in the Crimean war in 1854-5. During the Russo-Japanese war it was studied in Manchuria and before the present world conflict it was studied by a French ophthalmologist in the Algerian colonial troops. In most of the garrisons in Europe, even in times of peace, cases occur and this is more marked in Eastern than in Western Europe. In the non-military population, the same disability has been encountered in unfavorable economic and hygienic surroundings. Thus it has been known to prevail among the Fellahs of Egypt, the negroes on Brazilian plantations, sailors on long cruises, tunnel workers, and prisoners,

BOOK NOTICES

"Pitman's Progressive French Grammar," by Frank A. Hedgecock, formerly lecturer at Paris and Birmingham Universities and examiner for Matriculation, Birmingham, examiner to the College of Preceptors, etc. Master at University College School, London. Part I. Price, $1.50. New York, Isaac Pitman & Sons, No. 2 W. 45th Street and at London, Bath and Melbourne.

As the title of this book indicates, it is a French Grammar and intended to be of great aid to any one of America who has the fortune, or misfortune to be in France now or visit that country subsequently. The lessons treat of three important questions. First to make statements, second to ask questions and third to give commands. This being the case, it is absolutely necessary in the operations of the army for a Frenchman to understand something of English and it is certainly necessary for the soldier who is under the command of a French officer to understand something of French. The English soldier cannot understand the command of the French officer, unless he knows enough about French to interpret what the officer wants.

It has occurred to me that this small book of 326 pages was written to supply the needs of our people participating in the Great War in France. I think the volume supplies this need, or you might say, necessity.

"A Blue Devil of France," Epic figures and stories of the Great War, 1914-1918, by Capt. G. P. Capart, Late of General Petain's Staff Translated from the original French by J. C. Drouillard. W. J. Watt & Company, Publishers, New York City. Price, $1.50.

Once in ever so long, a story is told that, in the poignant simplicity of its relation is true artistry. In it, the author shows the mastery of that elusive thing, "human interest." And has something real to portray.

Such is "A Blue Devil of France." For of all the stories that have come out of the great war, not one has given a more humanly vivid picture, nor a clarity of the psychology of it all than has Captain Capart in this book. He knew and was of his people from Flanders to Esparges, from the Meuse to bloody Verdun, and straight through to the historic Battle of the Champagne.

In its terseness lies its vividness. Told in a style all of the writer's own, one of episodes rather than connected narrative, told as only a poetic and emotional Latin could tell it, it gives a more striking picture of the war and all it has meant than has yet been presented.

Had De Maupassant written of the greatest of all wars, he would have written as Captain Capart has, for here is a tale of blood and tears and Parma violets; a mingling of episodes that wring tears from the eyes, only the next moment to wreathe the mouth with smiles at something said or done by irrespressible youth which would not be denied even in the midst of chaos. A story in which dreaming rhapsodies are made on a grand piano in the midst of rotting ruins; of masked balls to the accompaniment of raining shell fire; of acts of daring and chivalry which might have come from the pages of history of the Middle Ages. But more than all, it is a story of the divine devotion of those who first, in the moment of need, gave their all for the salvation of a world.

To the American mind, Captain Capart will bring more closely than any other writer has, the picture of what might have happened in our own cities and villages had war come here.

These snatches out of the [illegible] prove most [illegible] claims, that "even the perfect [illegible] art of destruction has not killed the Romance of War."

The illustrations in this book are numerous and quite interesting to look at. The volume contains 198 pages.

"Blue Aloes" Stories of South Africa by Cynthia Stockley, Author of "Poppy," "Wild Honey," etc. G. P. Putman's Sons, New York and London. The Knickerbocker Press.

No writer can so unfailingly suggest and materialize the spirit of the weird mysterious South Africa, as can Cynthia Stockley. She is the favorite medium through whom the great Dark Continent its tales unfold.

A strange story is this, of a Karoo Farm, a hedge of blue aloes, that cactus of fantastic beauty, which shelters a myriad of creeping things, a whisper and a summons in the dead of the night, an odor of death and the old.

There are three other stories in the book, stories throbbing with the sudden, intense passion and the mystic atmosphere of the Veldt. This nice volume contains 358 pages and is interesting from the beginning to the end.

"A Manual of Gynecology," by John Cooke Hirst, M. D., Associate in Gynecology, University of Pennsylvania, Obstetrician and Gynecologist to the Philadelphia General Hospital. 12 Mo. of 466 pages with 175 illustrations. Philadelphia and London. W. B. Saunders Company, 1918. Cloth, $2.50 Net.

The author has attempted in this volume, so far as it is possible to do so on the printed page, to present the arrangement of the subject he has used in teaching during the last twenty years. His aim has been to present the subject concisely, accurately and without unnecessary waste of space.

In several sections, notably those on the injuries of child-birth, their consequences, diseases of the breast and hemorrhage, he has thought it best to consider the subject from the point of view of both the obstetrician and gynecologist, as the two are so intimately connected that to present it in any other way would be at the expense of thoroughness and clarity.

Throughout the book, an effort has been made to omit unprofitable discussion, and to give to the student, be he graduate or undergraduate, at least one method of treatment which has proven its value, as a basis on which to build as suggested by the individual's own experience.

A special chapter deal with Leukorrhea alone, one of the commonest disorders for which a patient consults her physician, and yet one which, because it is a symptom and not usually a primary condition, is too frequently passed over in the discussion of its primary cause.

The operation of dilation and curretage of the uterus—in the author's opinion is one of the most important, because of its supposed minor character—has been given somewhat extended space, being described three times, as its technic varies slightly for different indications.

Illustrations have been placed to make more clear the points about which students have most often questioned the author, and where he believed their presence is an addition to the explanation of the text. No attempt at lavish illustration has been made.

A book of this character always appeals to a certain class, namely students, and the busy practitioner who is anxious to primarily refresh his memory about certain things that he has to deal with. The author of this book is a good teacher and a practical man and no doubt the volume will receive the approval of the medical profession.

"Progressive Medicine," a quarterly digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, December 1st, 1918. Owners and Publishers, Lea & Febiger, Philadelphia, New York City. $6.00 per annum.

"A Text-Book of General Bacteriology." Sixth edition thoroughly revised, by E. O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago and in the Rush Medical College. Octavo of 691 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company.

In this edition the chapter on the Pneumococcus has been entirely rewritten and that on the The Meningococcus extensively revised. Several new sections have been added, including brief summaries of our brief knowledge of infection, jaundice, ratbite fever and trench fever. A number of minor changes and corrections have been made throughout the text-book.

This book is the outgrowth of lectures given to students in the University of Chicago during the past few years. The subject is one that the writer believes should find a place in every general scientific course. Bacteriology is chiefly of professional interest to the medical student, but the subject also bears technical relations to household administration to agriculture, to sanitation and sanitary engineering and to various industries and technological pursuits. For the general scientific student and reader bacteriology presents certain aspects that tend to open the outlook upon a variety of human interests.

The reader who wishes to acquire greater familiarity with the subject will find some bibliographical references given as a sort of first aid to the investigator. These include references to some articles of classis and historic interest, to some giving valuable summaries or bibliographies of important subjects and to a few in fields where investigation of very active or opinions considerably at variance. No pretension to completeness is made.

The fundamental principles and methods of laboratory work are treated as fully as seems desirable in a book of this class. The tendency manifested in all the natural sciences towards the elaboration of special laboratory manuals and guides has much in its favor. A number of such guides for bacteriology are in existence, among which may be mentioned the excellent manuals of Frost, Gorham, Heinemann, Moore and Novy, to mention only American authors. In any case a proper familiarity with laboratory methods can be gained only with the assistance of a skilled laboratory instructor possessed of individuality and resource.

The illustrations are not many, but are numerous enough and well selected. We very heartily recommend the book to any medical man who is interested in this line of study, and we all ought to be.

"Civic Biology," a text-book of problems, national and local, that can be solved only by civic co-operation, Clifton F. Hodge, Ph. D., Professor of Social Biology in the University of Oregon, author of "Nature Study and Life," and Jean Dawson, Ph. D., department of sanitation, board of health, Cleveland, formerly of MacDonald College, Canada, and Cleveland Normal School, author of "The Biology of Physa" and "Boys and Girls of Garden City." It will teach only such uses of authority as are necessary to secure the co-operation of several or many people to one end, and the discipline it will advocate will be training in the development of co-operative good will." Charles W. Eliot. Ginn & Company, Boston, New York, Chicago, London, Atlanta, Dallas, Columbus and San Francisco.

This book of 381 pages makes a neat nice little volume. To give a partial list of the subjects considered in this book will give the reader of this notice a pretty good idea of what the book is. "Plan of the Course as a Whole," "Equipment, Apparatus and Library," "The Insect Problem," "Birds," "Method of Bird Study and Special Problem," "Tree Study and Civic Forestry," "Plant Problems: Preservation of Wild Flowers, Control of Weeds and Poisonous Plants," "Home Planting and Landscape Gardening," "Practical Biology and Agricultural Production and Civic Utilization of Land," "Insect Type Problems: Important Flies," "Insect Type Problems: Mosquitoes," Insect Type Problems: Cabbage Butterfly," "Insect Type Problems: Ants," "Special Problems of Insect Control," "Arechnids. Problems of Spiders, Mites and Ticks," "American Mammal Problems," "The Rat Problem," "Fungi: Bacteria, Yeasts, Molds, Mildews, Rusts, Smuts and Mushrooms," "Fungous and Bacterial Diseases of Plants," "Bacteria," "Bacteria Continued" Laboratory Methods, "Control of Bacterial Diseases," "Control of Animal Parasites," "Civic Problems Relating to Mollusks," "Crustacea," "Amphibia: Sirens, Proteans, Salamanders, Frogs, Tree Frogs and Toads," "Reptiles: Crocodiles, Alligators, Turtles, Terrapins, Tortoises, Lizards and Snakes," "Practical Laws of Life," "Knowing How to Know How," "Problems in Discovery."

Its illustrations are very numerous and are of great value. The chapter dealing with the Rat Problem, from the medical standpoint is of great value, also the chapter on the Control of Animal Parasite is very important. The chapter dealing with Reptiles: Crocodiles, Turtles, Terrapins, Turtoises, Lizzards and Snakes are well written and the author evidently has an extensive knowledge of the subject. Altogether, the book is of immense interest. The price of it is not given. It is easily worth two or three dollars.

"Diseases of the Chest and the Principles of Physical Diagnosis," by Geo. W. Norris, M. D., Assistant Professor of Medicine in the University of Pennsylvania, and Henry R. M. Landis, M. D., Assistant of Medicine in the University of Pennsylvania, with a chapter on the Electrocardiograph in Heart Disease, by Edward B. Krumbharr, Ph. D., M. D., Assistant Professor of Research Medicine in the University of Pennsylvania. Octavo 782 pages with 413 illustrations. Philadelphia and London: W. B. Saunders Company. 1917. Cloth, $7.00 net. Half Morocco, $8.50 net.

The author's aim has been to write a practical book on the physical diagnosis of the heart and lungs in health and disease. They state that they have attempted to omit every thing not of practical diagnostic use and to condense methods of secondary importance. Even with this idea in view, they have given us a large volume of 782 pages. The department of the book written on the subject of Diagnostic Acoustics, is very full. This is because the writer believes that only through the comprehension of the laws of sound production and transmissian can the results of percussion and auscultation be intelligently interpreted. The writer has endeavored to teach as much as possible by means of illustrations. Of these,

many are photographs of frozen sections from the cadaver, previously hardened in formalin, so that the Anatomic of the tissues remain as during life. They have found specimens of this character invaluable in their teaching and the book has been written with the hope that the photographs reproduced in this section will be useful to others. Possibly this is the most up to date and complete book on this subject that exists now in the English language. This apparently is a very bold statement to make about a book, but on a close examination, we believe that our opinion of the volume is correct.

"Pathological Technique." Seventh edition. A Practical manual for workers in Pathologic Histology and Bacteriology, including directions for the performance of Autopsies and for Clinical Diagnosis by Laboratory methods, by Dr. F. B. Mallory, Associate Professor of Pathology, Harvard Medical School, and Dr. J. B. Wright, Pathologist to the Massachusetts General Hospital. Seventh edition, revised and enlarged. Octave of 555 pages with 181 illustrations. Philadelphia and London: W. B. Saunders Company. 1918. Cloth, $3.75.

The book has been rearanged in this edition with the subject of making it more useful. Among other changes, the post-mortem technique has been put at an end. The revision has been fairly thorough, but not so complete as could be wished, owing to the war.

Of additions, the following deserve mention: Goodpasture's acid polychrome methylene-blue stain for frozen sections of fixed tissues and also for demonstrating metacromatically the different granules in the myeloblastic series of cells and leukocytes, Benian's Congo red method for the demonstration of spirochetes, Claudio's stain for flagella, and the improved method of classifying pneumococci with reference to serum treatment.

As useful procedures which heretofore have not been generally recognized, attention is called to the use of the safety razor blade in section cutting, the employment of benzene in paraffin embedding, and Rubaschkin's method of fixing celloidin and frozen sections of the slide for staining.

Professors Mallory and Wright, who have written this book are not only nationally, but internationally known, have given to the profession who are interested in this branch of work a great book. No doubt this edition will be as well received as the former six editions, which have had tremendous sales all over this country and abroad. We commend the work of the publishers. The book is attractively and substantially bound and well printed.

"A Text-Book of Physiology." Seventh edition thoroughly revised. For medical students and hysicians by William H. Howell, Ph. D., M. D., Professor of Physiology, Johns Hopkins University, Baltimore. Octavo 1059 pages, 307 illustrations. Philadelphia, London: W. B. Saunders Company, 1918. Cloth, $5.00 net.

In the preparation of this book, the author has endeavored to keep in mind two guiding principles: First the importance of simplicity and lucidity in the presentation of facts and theories, and, second, the need of a judicious limitation of the material selected. In regard to the second point, every specialist is aware of the bewildering number of researches that have been made and are being published in Physiology and the closely related sciences and the difficulty of justly estimating the value of conflicting results. He who seeks for the truth in any matter under a discussion is often times forced to be satisfied with a suspension of judgment, and the writer who attempts to formulate our present knowledge upon almost any part of the subject is in many instances obliged to present the literature as it exists and let the reader make his own deductions. This latter method is doubtless the most satisfactory and the most suitable for large treatises prepared for the use of the specialist but for beginners it is absolutely necessary to follow a different plan. The amount of material and the discussions of details of controversies must be brought within reasonable limits. The author must assume the responsibility of sifting the evidence and emphasizing the things that seem to be most justified by experiment and observation. As far as material is concerned, it is evident that the selection of what to give and what to omit is a matter of judgment and experience upon the part of the writer, but the present author is convinced that the necessary reduction in material should be made by a progress of elimination rather than by condensation. The latter method is suitable for the specialist with his background of knowledge and experience, but it is entirely unfitted for the elementary student. For the purposes of the latter brief, comprehensive statements are often times misleading, or

fail at least to make a clear impression. Those subjects that are presented to him must be given with a certain degree of fullness if he is expected to obtain a serviceable conception of the facts and it follows that a treatment of the subject of physiology is possible, when undertaken with this intention, only by the adoption of a system of selection and elimination.

In this, as in former editions, no fundamental change has been made in the contents, arrangement of the material, or the general principles of presentation which were originally adopted. But in the three years that have elapsed since the sixth edition the natural expansion of physiological and medical research has yielded much information. To incorporate the main features of this added knowledge, it has been necessary to make many alterations. Throughout the work additions, substitutions, and omissions have been used in order to bring the book up to date as nearly as possible.

It is now thirteen years since the first edition appeared. During this period the author has tried faithfully in the successive editions to keep the book in line with our advancing knowledge. It is not probable that he has been wholly successful in these attempts, for the literature bearing upon the subject has increased steadily in volume and complexity, but certainly he has not altogether failed. The book has moved with the current of contemporary physiological thought, as a text-book must if it is to be useful to its clientele of students.

Possibly no man in America is more capable of writing a text-book on Physiology than Professor Howell. He has been for a number of years, Professor of Physiology in one of the largest and best Medical Colleges in this country. It would certainly be a very exact critic who could find much fault with this volume from any standpoint.

Dyke's Automobile and Gasoline Encyclopedia. Eighth Edition. 932 Pages, 3400 illustrations, is just off the press.

In reading a review of a leading London publication on the sixth edition, they say: "we have had encyclopedias of motoring before this one, but none so deserved its title. It is the most comprehensive, exhaustive, and informative work yet published on the subject of the motor car and its technique."

"The Aeroplane" of London also reviews the book and praises it highly. Then, further on, in some of Mr. Dyke's list of testimonials and printed matter, we see a copy of a letter addressed to Mr. Dyke's London agent, wherein the Royal Flying Corps have sanctioned the book and propose using it for instrutcional purposes.

Now that Mr. Dyke has brought out a larger edition with many additions and improvements in the way of revision and illustrations, there is no reason why the book should not be classed as the "best seller' 'of automobile books.

Each and every subject has been carefully revised and brought up to date. For instance, under Carburetion, the reader begins with the simplest form of the carburetor, after the reader becomes familiar with the fuandamental principles, he then learns the purpose and meaning of metering-pins, air-valves, dash-pots, and finally, the very latest Pitot or "plain-tube" principle, which is now becoming very popular. In just this manner the reader, or student, progresses from the first principle of an engine to the complicated parts of a twelve cylinder engine.

The ignition subject is made wonderfully simple and clear, as is also the subject of electric starting and generating system.

The repair subject deserves special mention. Every part of a car or engine is thoroughly treated. One has but to refer to the index to find out how to take up bearings, connecting rods, grind vales, test compression, and just what to do to give an engine more power. Every detail is illustrated and the explanation is so simple that he has but to follow directions.

There are many new additions to the seventh edition, such subjects as Trucks, Tractors, Motorcycles, Airplanes and Airplane Engines, are thoroughly covered.

Under the subject of Trucks, not only the construction, care and operation of a truck are explained, but how to dis-assemble and repair a truck engine is also explained. Truck Governors, including all leading makes are described and illustrated. The four-wheel drive and internal-gear drive rear axle are fully explained and illustrated. Ignition, Carburetion and kindred subjects dealing with the truck engine are described.

The Tractor subject deals with different drive methods, as "chain" and "rail-track" treads, transmission system, tractor engines, ignition, carburetion, Holley kerosene vaporizer, air washers, etc. The Ford, "Twin-City." Caterpiller and Cleveland are used as examples.

Motorcycle subject treats on just those points one wants to know about; how a

twin "V" engine fires, names of all parts, how the valves are operated and timed, how the magneto and electric system is operated, etc. The Indian and Harley-Davidson Motorcycles are fully explained and illustrated.

Airplanes—fully illustrated. Some of the subjects are: types of airplanes; name of parts; control members and instruments, showing their location and purpose; how the airplane is made to ascend and descend; how the landing is made; principle of flight; glossary of aeronautical words and terms. A simplified explanation of the altimeter explaining the instrument indicates altitudes, etc., is made especially clear.

Airplane Engines—construction; types of engines; how they differ from autmobile engines; cooling; lubrication; carburetion; ignition; valve timing; adjustments; etc. Some of the engines described are: Hall-Scott, Wisconsin, Sturtevant, Gnome Monosoupape, Mercedes.

Dictionary of motoring terms, also an English-French dictionary of motoring words and terms. Ford Supplement revised and improved. Packard Supplement in two colors dealing with the 1918 model.

Inserts:—There are four large two-color inserts 12x9 inches. No. 3 illustrates the Dixie Magneto with many large illustrations, showing all parts, their names and purpose. Also the Dixie Motorcycle Magneto and how it fires a twin-cylinder engine. The Indian and Harley-Davidson motorcycle engines are illustrated with sectional views with all parts lettered. No. 4. is a large two-color illustration of a 4-cylinder engine—especially adapted for class room use. The student can draw in the piston, connecting rods, crank shaft and timing gears on one side and on the other side, the cam shaft, cams, valves, etc.

Price: Regular Cloth Binding, as heretofore $3.50 or $3.82 prepaid. Published by A. L. Dyke, St. Louis, Missouri.

Women in the World's Progress.

In this day when women's work is so important in keeping the wheels of the world's progress moving, their physical condition should be conserved in every way, whether it be in the home, in commercial offices, or in the hospital as a nurse, as the value of th ir services is beyond calculation. But unfortunately, much time is lost through menstrual irregularities, and much suffering incident to the pain thereto.

Dysmenorrhea is possibly the most frequent cause for the loss of time, and in mitigating this condition, not alone is the conservation of time an item, but the relief from pain is a humanitarian act.

In the treatment of Dysmenorrhea, Hayden's Viburnum Compound will add many hours and days of comfort each month to the lives of the sufferers. Its universal adoption and recognition by the profession was established upon the satisfactory results which it renders in Dysmenorrhea.

Given in two teaspoonful doses administered in hot water will afford relief from pain. It contains no narcotics, nor habit forming drugs, and if you are not familiar with its efficiency, a request to the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass., will bring you samples for clinical demonstration, and a brochure giving formula and many suggestive thoughts in the use of this product.

Hernia of the Urinary Bladder; Notes of Cases, with Remarks on Strangulation of Femoral Herniae and Its Treatment—Blakeway (London Lancet) says that hernial protrusion of the urinary bladder is a comparatively uncommon complication of inguinal and femoral herniae. Diagnosis cannot usually be made before operation, though symptoms and statements of the patient may suggest it.

This difficulty of diagnosis and its rarity have led in many cases to injury to the bladder during operations for relief of hernia.

The author has operated upon five cases of hernia in which the bladder protruded. Three were males and two females. The ages varied between forty-eight and seventy-one years. All were on the right side, of the direct inguinal variety in two of the males, and of the femoral type in the other three cases. A sixth case was seen in which diagnosis was made without operation.

In all the cases operated upon, the relative position of the sac and the herniated process of the bladder were similar. The bladder protrusion in all cases involved the whole thickness of the bladder wall. It was closely applied to the inner side of the neck of the sac, and in each case was about the size of a walnut. At operation it was always found collapsed and might easily have been accidentally wounded or ligated.

Any thickening about the inner side of the sac of an inguinal or femoral hernia, especially if of long standing, should excite suspicion.

Miscellaneous.

The Etiology of Sprue.—The etiology of a very considerable number of the tropical diseases is unknown, and sprue is one of these. Perhaps the latest of the many causes which have been suggested for this profound alimentary disturbance is that it is a streptococcal infection. Sir Leonard Rogers was the first to attribute sprue to this origin. In the Lancet, June 6, 1914, he reported the successful treatment of two patients with a vaccine of streptococci which had been isolated from their mouths. Dr. Lucius Nicholls, director of the Bacteriological Institute, Ceylon, writes in the Indian Medical Gazette, November, 1918, concerning streptoccal infection as a possible cause of sprue. He wisely draws attention to the fact that streptococci can be isolated from the mouths of the majority of persons in normal health and that consequently any claim that they are the cause of a disease requires considerable substantiation. Moreover, it is very necessary to attempt to define the character of the streptococcus associated with sprue; and this raises the vexed question whether or not the organisms of this class which are found in etiological relationship with so many and various diseases can be described satisfactorily. The results of various morphological, cultural, and serological tests made by Nicholls for the purpose of distinguishing between different types of streptococci were as follows: So far as morphological and cultural tests are concerned, the outcome may be summarized thus: The streptococci isolated from cases of sprue do not possess a capsule, they are nonhemolytic, they are not lyzed by ox bile, they do not produce acid from mannite in the serum water of Hiss, and they produce green colonies on blood agar. Nicholls has tested the sera of sprue patients with the organisms isolated from their mouths, but the results have been so irregular and indefinite that he could form no conclusion in such cases.

With regard to the complement fixation test, he has tested the sera of three patients who showed all the definite clinical symptoms of sprue, and serum from two persons in normal health was used for control. The result was that 0.01 c. c. of the serum of patients suffering from sprue failed to fix the complement, whereas .05 c. c. produced complete fixation. Normal serum showed practically no power of fixing the complement. With streptoccal vaccines Nicholls has treated or has under treatment nine patients, and he is strongly of the opinion from the results thus far that the good results obtained from vaccine by Rogers will be duplicated in the nine cases. It must be borne in mind that pathogenic organisms exhibit virulence and elective affinities for various tissues, and it is known that streptococci are able to acquire or lose these properties.

The author points out that sprue is almost wholly confined to thickly populated countries in which the climate is humid and warm. Further, the majority of the inhabitants of Ceylon are addicted to the habit of chewing, this conduces to the habit of spitting and therefore there is every chance of streptococci being continually passed from one person to another whose mouths have been irritated by chewing. It does not seem, then, unreasonable to suggest that in this manner streptococci may increase in virulence and acquire an elective affinity for the alimentary mucosa.

It has been frequently suggested, of course, that sprue is a disease due to errors of diet. It has been even hinted that it might be placed in the category of what are known as deficiency diseases. In fact, sprue possesses many symptoms in common with pellagra, which is generally regarded as a deficiency disease or as due to errors of diet. Pellagra and sprue closely resemble each other in many of their manifestations. There is the same wasting of the organs and thinning of the walls of the alimentary tract, and sore mouth and intractable diarrhea. As Nicholls remarks, the suggestion that an error in diet has prepared the way for a streptococcal infection of the alimentary tract will explain many factors associated with sprue, and it may be added with pellagra also.

Some well-known investigators have held the view that scurvy was due to a streptococcal infection, and if the view is correct it may be that the absence of a vitamine from the food renders the system open to an attack by streptococci. Nicholls notes, that according to Rogers (Indian Medical Gazette), April, 1918, many military officers have observed when on campaign that the number of cases of scurvy can be reduced to almost a disappearing point by strict attention to mouth cleanliness among the troops. It appears quite within the realms of probability that the so-called deficiency diseases are not directly owing to lack

of vitamines, but to the fact that this deficiency of the vitamine element has so reduced the resisting powers of the body that it is susceptible to the attacks of streptococci which are lying in wait in the mouth for such an opportunity. It certainly does seem that sprue has several points in common with pellagra and to a less extent with scurvy. Experiments in this direction should be productive of valuable and interesting results. In the meantime enough is known already of sprue, scurvy, and pellagra to state that in their treatment the indications are to eat suitable food, that is, food containing the essential vitamine elements and to keep the mouth scrupulously clean. The maintenance, especially, of a clean mouth is a preventive measure against disease, the importance of which is frequently overlooked.—Medical Record.

A Note on the Progress of Cicatrization of War Wounds.—Tuffier and Desmarres (J. Exp. Med.) says that the therapeutic effect of a physical or chemical agent on the cicatrization of wounds can be ascertained empirically, the authors state, from the rate of the process of cicatrization, and to demonstrate this effect scientifically it is necessary first to determine exactly the normal progress of a sterile wound, that is, the course of cicatrization in a given time, a unit of measure being thus obtained. When the normal progress of the cicatrization of a wound that is kept bacteriologically sterile is known, it becomes possible to study the changes taking place under physical or chemical influences.

The authors are aware that to subject organic processes to a mathematical formula is always a hazardous procedure. However, they believe that by eliminating certain causes of error and adopting the controlled conditions of experimentation, results can be obtained which show the exact coincidence of mathematical forecasts with clinical evidence. This parallelism, they believe, is constant and regular; and if it becomes irregular, it is due to an error in therapeutic methods, thus furnishing a means of control of the care given to the patient.

The present work is the result of observations on 20 cases in regard to the sterilization of the wounds as well as their rate of healing.

The authors point out that cicatrization results from two processes, contraction of connective tissue and epidermization, contraction being in reality a mechanical action connected with the appearance of granulations on the surface of the wound. It is also known from the work of du Nouy that a sterile surface wound heals in a period of time which can almost invariably be predicted by a simple calculation. It has also been shown by du Nouy that the index is clearly connected with the age of the patient and the initial surface of the wound; from a considerable number of observations, a short table has been constructed which, on the assumption that the wound is sterile, makes it possible to determine the index a priori after only one measure of the surface, when the age of the patient is known. The index varies approximately between 0.02 and 0.08.

From their experiments the authors suggest some hypothetical conclusions bearing on the evolution of cicatricial tissue. The arterial circulation deposits in the wound chemical substances necessary for contraction of the wound and for epithelial proliferation. When the biologic process was not hindered by any special or severe bacterial infection, this deposit was as regular as the circulation itself, and enabled them to determine in advance the date of cicatrization. It even seemed as though when the epidermization process was retarded by a slight infection, the substances necessary for epidermization were stored up in the wound, and when the delay due to infection was removed, the epithelium found an accumulation of nutritive substances and, so to speak, made up the lost time.

Moreover, when an infection entirely or partially stopped epidermization, they observed that after the infection had disappeared the progress of new epidermization was much more rapid than normally; it even passed the calculated curve. The infection apparently left in the wound the chemical substances which activate epidermization.

The existence of these physical or chemical activating agents was indicated again by two anatomical clinical facts. In treating a scalp wound in which there was practically no epidermization for many months, they applied over the entire surface of the sterile wound dermo-epidermic grafts of foetal skin. After apparently taking, the grafts were absorbed and disappeared, but epidermization of the periphery of the wound, which hitherto had not progressed, took place abundantly, almost a hundred times as much as before.

The authors believe that by mathematical measurements the problem of the action of various organic fluids on the cica-

trization of wounds can be solved.—Surg. Gyn. and Ob.

The Treatment of Fractures in Warfare.—Lane, in the London Lancet, remarks that no surgical cases during the war have been so badly treated as simple fractures. This was due either to a lack of knowledge of the mechanics of fractures or imperfect technique. Lack of asepsis, improper strength of plates and screws, screws torn out because the gauge of drill and screws did not correspond, and the splinting of bone fragments in poor position are some of the causes leading to such poor results.

The writer concludes as follows:

1. Only exceptionally should fragments be fixed by plates when the wounds are very foul.

2. If found necessary under such circumstances, the screws should be inserted as far as possible away from the seat of the fracture.

3. Operative interference should be postponed until the wounds have healed, and consequently the tissues are free of organisms.

4. If a septic focus is noted during operation, a culture and vaccine should be obtained for use should infection ensue.

5. Should there be a suspicion of the presence of latent sepsis, the Carrel method of irrigation should be employed. Otherwise the wound should be completely closed.

6. Under no consideration should any bone be removed. Accurate apposition can be obtained if the surgeon knows how to bring it about.

7. Fragments of bone and callus should be saved to fill in any interval in the shaft.

8. Much heavier steel plates are needed in the malunited fractures produced by projectiles than are usually employed in less comminuted fractures in civil life.

9. Provided no strain shall be exerted on the junction, the sooner a patient with fracture of the long bones of the leg is got up and about, the more bone will be deposited. For this a good ambulatory splint is necessary.

10. If the interval between the fragments precludes union, a bone graft must be inserted.

11. Rarefying osteitis around screws and plates is evidence of faulty technique.

12. More skill is required for this work than any other war time operative procedure.

13. Sepsis and haemorrhage are the two greatest risks.

The Tonsil Adenoid Operation.—McKenzie, in The London Practitioner, urges looking for hypertrophied adenoids not only in middle ear suppuration, but also in seemingly trivial attacks of middle ear catarrh. In patients in whom there is no sign of adenoids except the pain or discharge from the ear, the nasopharynx must be examined with the finger. In others the tonsils are enlarged and the adenoid hypertrophy may be assumed to be present. He warns that in acute suppuration of the middle ear the throat should not be operated on until the acute ear symptoms have subsided; otherwise the throat wound is prone to become septic. The same caution applies in acute tonsillitis. Previous to operation carious teeth should be removed, the socket wounds healed, and the mouth treated with some simple antiseptic mouth wash to guard against sepsis. Fatalities are very rare, but he has had five. One was due to the anesthetic; one to postoperative pneumonia; one to meningitis following postoperative otitis media; and two to general sepsis. Thus three were due to septic infection, the source of which was found in the mouth. As regards anesthetics, McKenzie employs none in infants under one year till about the age of puberty, and after that age nitrous oxide, with or without ether or chloroform. He does not care for local anesthesia. Tonsils should be removed in toto. In children enucleation with the guillotine is an ideal operation; it removes the whole of the tonsil, yet spares the faucial pillars and part of the capsule, so that the fossa or bed of the tonsil is not obliterated by granulations and scar tissue, and the natural formation of the throat is preserved. This method does not succeed in adults, in whom he prefers to use the snare. For the removal of adenoids he prefers the La Force adenotome. Before the patient leaves the operating table the surgeon should mop out the throat and make certain that bleeding from the tonsil has actually stopped, for McKenzie believes that severe tonsillar hemorrhage is always primary. After all operations on the throat or nose the patient should be laid semiprone on his side with the face turned half down, the mouth and jaw not tightly closed. After the anesthesia has passed off a little oozing may be ignored, unless it is long continued, but serious bleeding is more difficult to arrest than it would have been on the operating table. Examine the throat with a good light; if one tonsil is occupied by a large clot the hemorrahge is there. If in doubt whether the tonsil

or the adenoid area is bleeding hold the patient's head face downward; blood from the adenoids will emerge at the nose, from the tonsil at the mouth. If a bleeding point can be seen at the tonsil it may be picked up with a large pressure forceps and another looked for. Hold aside the anterior pillar and examine its posterior aspect, for this is a favorite site. When all bleeding points have been seized they may be ligated with catgut, or the forceps may be left on for twelve hours. When no bleeding points can be seized a tonsillar hemorrhage must be controlled by pressure. Hemorrhage from the adenoid region is rare, is usually due to incomplete removal of the adenoids, and can then be stopped by completing the operation. Otherwise it must be checked by packing the nasopharynx. He calls attention to a type of deafness apparently due to a clump of adenoids in the fossa of Rosenmueller, which is apt to escape when adenoids are removed in the usual manner, and may evade the examining finger, but are seen by means of the nasopharyngoscope as curled ringlets of adenoid tissue in the fossa, frequently associated with closure of the Eustachian orifice and oedema of its posterior lip. Its removal is a prime necessity.

Posterior Extraction of Projectiles from the Pelvic Cavity.—Auvray (Presse Medicale), recommends that, in such operations, a large opening be made in the soft tissues to facilitate deep exploration in the pelvis. In two cases he found it necessary to cut a large flap in the gluteus maximus combining an incision parallel with its fibres with loosening of part of the muscle at its attachment to the bone above and medianwards. Upon resuture of the attachment there was no subsequent functional disability, locomotion and bending movements being carried out normally. In each of the author's three cases exposure of the pelvic cavity necessitated some operative procedure in respect of the sacrosciatic ligaments. In the first case the great sacrosciatic ligament was detached from the sacrum, the lower part of which was resected as in Kraske's operation, thus permitting free access to the posterior rectal wall. In the second case the operator entered the pelvis through the upper part of the sciatic notch after complete transverse section of the outer half of the sacrosciatic ligament. In the third case, in which the missile entered the pelvis through the lower part of the great sciatic notch, Auvray loosened the sacrosciatic ligament from the sciatic spine and was able thus to seize the foreign body with forceps in the vicinity of the bladder. In extracting foreign bodies from the walls of the rectum he found combined rectal palpation and finger exploration through the wound itself of great advantage. The rectal finger served to keep the rectal wall in contact with the other finger and to steady the viscus during incision into the shell of tissue surrounding the foreign body.

Tetanus in Home Hospitals.—Bruce, in The London Lancet, presents an analysis of his third series of 200 cases to show the influence of treatment. In the first series the mortality was about fifty-seven per cent., in the second about forty-nine per cent., and in the present series only 36.5 per cent. The recommendations for treatment are as follows: Put the patient in a darkened room with a sympathetic and competent nurse. Provide rest, sleep, and food as the first essentials of treatment. Thorough surgical treatment should be carried out from the inception of the wound, and would enormously reduce or totally eradicate tetanus if always done early enough. Foreign bodies and necrotic tissues should always be removed at once, but if tetanus has developed from neglect, then the wound should not be interfered with until the tetanic symptoms have been controlled. In developed cases at the appearance of the first evidence of tetanus large intrathecal doses of a concentrated antitoxin should be begun and supplemented by intramuscular and subcutaneous injections. Sedatives should be used in addition, if necessary. Morphine in 0.25 grain doses every four hours is probably the best, but chloral, chloretone, and others may be used. Every wounded man should receive a prophylactic dose of anti-toxin at once, repeating it one or more times.

Pathogenesis of Anxiety as a Nervous Symptom.—Lepold-Levi (Presse Medicale), considers nervous anxiety a bulbar manifestation, the centre presiding over which—"the safety centre"—corresponds to the points of origin of the vagosympathetic nerve distribution in the medulla. More or less predisposed to react to influences of variable nature, this centre is made sensitive by ductless gland secretions, especially those of the ovaries, adrenals, and thyroid, the last in particular. Attention is called to the frequency with which symptoms denoting thyroid instability occur among subjects troubled with anxiety, to the presence of anxiety in ex-

ophthalmic and endogenous goitres, and to the appearance of anxiety as a result of thyroid feeding. Small doses of thyroid substance, administered on the basis of these views in appropriate cases, completely transformed the condition of a large number of patients.

The Vibrating Sensation in the Differential Diagnosis of Affections of the Spinal Cord and Peripheral Nerves.—Williamson, in The London Lancet, calls attention to the value of the vibrating sensation in the differential diagnosis of affections of the spinal cord and peripheral nerves from hysteria, functional diseases and malingering.

He tests the vibrating sensation by a large vibrating tuning-fork, the foot of which is placed on a subcutaneous bony surface, such as the malleoli, the inner surface of the tibia in the leg, the anterior superior iliac spine, the styloid process of the ulna at the wrist, the sternum, etc.

Loss of vibrating sensation is often one of the earliest signs of sensory affection in lesions of the spinal cord. It is often lost before other forms of sensation are affected.

In the differential diagnosis of organic paraplegia from hysteria, functional disease, and malingering, he calls attention to the following point. In any case of paralysis or paresis of the legs, if the vibrating sensation is lost, while other forms of sensation are recognized, and the patient persists in this statement in spite of suggestions to the contrary, malingering or hysteria is very improbable. In malingering or hysteria, if sensation is affected, the vibrating sensation and other forms of sensation will usually be lost together.

Vibrating sensation has been lost in cases of spinal disease which have come under the author's observation that were probably due to combined pos erolateral degeneration and lost at a very early stage before other forms of sensation had been lost. He quotes the case of a man called for military service in 1917. The patient stated that he considered himself unfitted for military service because of a weakness or heaviness in his legs and slight unsteadiness in walking could have been attributed to neurasthenia or malingering but for two signs. The knee-jerks were normal; no ankle clonus could be obtained; and the only definite sign of organic disease was the loss of the vibrating sensation on the legs and the change in the plantar reflex. Six months later he showed well-marked signs of organic disease.

Williamson calls attention to the value of testing the vibrating sensation in the numerous cases of lesions of the cord and peripheral nerves now coming under observation in military practice.

Anterior Poliomyelitis—Shall We Permit This to Result in Infantile Paralysis?—To the learned members of our profession there is a well defined group of symptoms, a group common to no other disease, significantly diagnostic of anterior poliomyelitis. Despite this, an inscrutable conservatism decrees that we suspend definite deduction pending development of the case, said development being the onset of paralysis, at which point we may be positive and announce with no fear of contradiction that which any erudite layman may at once recognize.

Scientific accuracy is thus drawn to an attenuated point, with most serious consequences to the helpless patient. Better, far better, the use of prompt remedial measures in the incipiency of the attack, with the patient speedily restored to health and full vigor, permitting complacently a question of diagnosis on the part of the less expert.

The weight of evidence as to the infectiousness of this disease seems to greatly preponderate the negative view. Nothing in the history of sporadic cases, and nothing convincing in the recent endemics justifies the drastic measures taken by our health boards as regards quarantine. In fact, the atmospheric origin and spread alone will account for the majority of cases. The severe measures adopted and restrictions enforced are of questionable expediency or wisdom.

The results of treatment in segregation hospitals have not fulfilled either the expectancy of the public nor the hope of the medical attendants, notwithstanding the watchful care and studious attention of the latter.

The prognosis remains favorable as to life itself, indefinite and unsatisfactory as to the degree or ultimate history of the ensuing paralysis.

Our profession is so ultra-conservative that it is not inclined to consider any method of treatment aside from the beaten path of drugs and surgery, other than to turn an expectant, hopeful eye to the field comprising antitoxins, vaccines and serums.

We have, in the properly directed and combined use of the X-ray, radiant light and heat, properly selected forms of the high frequency current and a few simple drugs, a method which exceeds in use-

fulness to humanity all that has heretofore been discovered.

Denial, scoffing, ridicule, carry neither weight nor argument. The true scientist, the earnest physician, the broad-minded man is always ready to investigate, ever open to conviction.

Therefore, the writer here and now challenges any one to produce a case of anterior poliomyelitis in the pre-paralytic stage, or a case of cerebro-spinal meningitis within the first twenty-four hours of its onset, that may not be relieved, checked, aborted and cured within from five to seven days under intelligently directed treatment embodied in the combined use of the measures noted, comprehended under the general term electro-therapeutics.

If the claim embraced in this challenge is founded on scientific facts, as is true, with corroborative clinical experience, likewise true, and capable of convincing demonstration, is it not unjust to the victim of either disease noted to ignore it?

Given the opportunity, can any physician, knowing that such a claim has been made—and ignored—gaze complacently upon the little cripple evolved despite his care, or calmly affix his signature to the final demit of the victim to spotted fever? —Dr. F. C. Tice, in Virginia Medical Monthly.

Chronic Sinusitis in Soldiers.—Sterckmans (Archives Medicales Belges) relates ten cases of sinus disease illustrated with photographs and radiograms, and concludes as follows: These affections are very common, and while it is usually easy to locate an acute sinus inflammation, the reverse is true if the disease is chronic. This difficulty is due largely to the fact that in chronic affections we are often dealing with a polysinusitis. Treatment of these cases must be active and energetic and we must not shrink from opening up these cavities whenever such a course is indicated and even when drainage seems to be absent. The diagnosis must be exact and we should use every diagnostic resource available. Thus the author makes a thorough use of radiography and with good results. The method is very commonly neglected, but he cannot understand why for he finds it quite indispensable, especially in ethmoid disease. The writer has utilized the expert services of a colleague instead of trying to do his own work. There is considerable objection on the part of the soldier for fear of a bad cosmetic result, and even members of this profession are not without apprehension of this sort. The latter is unfounded, for in the great majority of cases healing of the operation wound takes place by first intention.

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THE ETIOLOGY OF EXOPHTHALMIC GOITRE.

By Israel Bram, M. D., Instructor in Clinical Medicine, Jefferson Medical College, Philadelphia.

In a disease the mechanism of which is still shrouded in mystery, the cause or causes are not to be spoken of in definite terms. Observation yields a few well recognized factors which seem directly or indirectly to have an etiological bearing on exopthalmic goitre.

Whatever the remote or predisposing causes may be, one thing seems certain: Graves' disease is directly caused by an oversupply of thyroid secretion thrown into the circulation, and possibly also an alteration in quality of this secretion. In support of this statement, nearly all clinicians agree that any measure directed toward **reducing the formation of thyroid secretion** yields relief.

Though the syndrome of exophthalmic goitre corresponds to the signs and symptoms of thyroid intoxication and may be artificially produced by over-dosage with thyroid substance, it is likely that these manifestations are not caused by the thyroid alone, but that other, if not all remaining ductless glands, conspire to produce the same effect. The functions of the ductless glands are interrelated; when one becomes abnormal in structure and function, the others also become abnormal, and it is also evident that because of this ductless gland abnormality, the other systems of the body (the gastro-intestinal, nervous, genito-urinary, etc.), are variously involved. Tyson very ably sums up the question: "The more one studies hyperthyroidism, the more one realizes that it is the algebraic sum of many morbid processes, some of those arising in the thyroid gland, others in the parathyroid, others in the pancreas or adrenals, or in the general metabolism of the liver itself; and there are evidences that the pituitary body and the ovarian secretion are not unimportant in the interrelationship among those many glands, and not without their influence in the varying expressions of the general metabolism of the body. Hyperthyroidism is not an entity; it is not the expression of a single influence. It is the manifestation of a lack of equilibrium in the relationship of many glands of the body, and this equilibruim may be influenced by an increased or diminished function of any of these related ductless glands. We must therefore realize that when we consider a typical form of Graves 'disease, the thyroid may be the last at fault, and furthermore, we must realize clinically that where tachycardia is present, we should think of some disturbance of internal secretion, and not attribute it to mere nervousness, thus dodging the responsibility of a more accurate diagnosis. When nervous irritability and change of disposition occur, where formerly reasonable patients present a veritable chorea of intellectual functions, we should not attribute it to neurasthenia, but realize that they are suffering from internal poisoning which we have been accustomed to consider as part of the symptoms of Graves' disease, and which we would readily recognize if the full picture were present with exophthalmos, goitre, and tachycardia combined. As long as the goitre or exophthalmos is present, or the tremor with the tachycardia, there is no question that the patient will soon be placed with the proper clinical group, but it is in these cases in which the symptoms which we formerly considered cardinal are absent, or where they are present only in slight degree, that we usually fail to recognize the chief disturbances as one of upset equilibrium among the ductless glands."

According to Mobius, Graves' disease is due primarily to disease of the thyroid gland, in which there is an excess of thyroid secretion. This is strongly supported by the following clinical facts:

(1) The condition is the direct antithesis of myxedema, in which there is a lack of thyroid substance in the blood.

(2) Partial resection of the goitre, or partial ligation of the blood supply causes at least a diminution of the symptoms.

(3) Most, if not all the symptoms of exophthalmic goitre may be artificially produced by the oral administration of thyroid.

(4) Thyroid gland, administered to a subject of Graves' disease, aggravates the symptoms.

(5) The failure of other theories to satisfactorily explain the causation of the syndrome.

Beebe maintains that Graves' disease is

a compensatory hypertrophy of the thyroid gland during a toxemia.

Hart, Garre, Capelle, and Bayer are inclined to believe that the thymus gland is largely, if not wholly, responsible for the Graves' disease syndrome.

As regards the etiological relationship of the enlarged thymus to the disease, it appears to me that it is plausible to assume that the enlargement of the thymus (as indeed the enlargement of the remaining lymphatic glands), is caused by and is therefore secondary to the surcharging of the blood with the products of an overactive thyroid gland. In support of this hypothesis we have only to recall that an undue amount of thyroid secretion is a real irritant or poison to the system and that the lympahtic tissues of the body usually assume the role of filters for the protection of the blood stream against toxins, and undergo a compensatory hypertrophy in the performance of this protective function.

The view that exophthalmic goitre is due to infection from the gastro-intestinal tract is held by many observers, notably McCarrison, Baylord, Epstein and Thompson, and is seemingly confirmed by the experimental evidence of Halsted and Hertoghe. To support this theory, it is suggested by Blum that albuminoid toxins are rendered inocuous by the iodization of thyroid activity, and that an undue quantity of these poisons existing in the intestines would demand a compensatory increase in thyroid activity, hence, hyperthyroidism.

That Graves' Disease is of bulbar origin was suggested by such men as Todeschi, Filchus, and Warburton who, by making section of the restiform bodies produced a syndrome of symptoms including an increased vascularity of the thyroid, tachycardia and exophthalmos. The syndrome did not occur, however, if the section was preceded or accompanied by thyroidectomy.

Basedow's Disease originates in the entire sympathetic nervous system is the contention of Buscham, Sattler, Trousseau, Charcot and others.

Friedreich believes that the disease is caused by an enlargement in the calibre of the coronary arteries of the heart, and this, resulting in tachycardia, would lead to nervous phenomena.

According to Crile, the hyperplasia is not a cause but a concomitant effect of exophthalmic goitre. In support of this view, he points out that only a small percentage of cases of thyroid hyperplasia is associated with Graves' Disease, for hypertrophy of the thyroid is chiefly incident to pregnancy, to adolescence, to many infections, especially tuberculosis, and to cretinism. He claims that hyperplasia of the thyroid is no more the cause of exophthalmic goitre than it is the cause of pregnancy, of tuberculosis, or of adolescence. In each and all of these conditions hyperplasia is an effect, not a cause. "Here the analogy ends, however, for although resection of the thyroid does not terminate pregnancy, does not cure tuberculosis, does not modify the phenomenon of adolescence, it does improve or cure every case of exophthalmic goitre." (I heartily object to the reference of invariable improvement or cure through surgical means, of every case or even many cases of Graves' Disease; my grounds for objection are contained elsewhere in this work.)

Geographical Distribution. — Though simple goitre occurs quite commonly as an endemic disease in certain parts of the world, as for example, in Switzerland, France, Italy, and is comparatively rare in the plains of North Germany, the Netherlands, and in North America, this cannot be said of exophthalmic goitre. Hyperthyroidism is little, if at all, influenced by geographical location, and probably not etiologically related to simple or atoxic goitre. Indeed, Graves' Disease is rare in districts where ordinary goitre is common. Among a thousand cases of goitre seen by Dr. Savage (quoted by Berry), in a goitrous district in the north of England, there was not a single case of Graves' Disease. The experiences of Dr. Montoya Y. Florez and James Berry confirm this statement. It is my opinion that this is probably due to the more obtuse emotional mechanism existing in the inhabitants of goitrous districts. Though it is said that Graves' Disease is more common at the seacoast than elsewhere, we have no statistics to prove this assertion.

Heredity.—The presence of a neuropathic tendency (asthma, hysteria, epilepsy, migraine, insanity, etc.), has been often demonstrated in these cases. Observing internists are often impressed by the frequency with which these conditions occur interchangeably. A parent of unstable emotional balance or one excessively high-strung is apt to have a child susceptible to chorea or epilepsy, whose child in turn may develop hyperthyroidism in the course of its existence. It is not uncommon to find an apparent direct inheritance of the disease itself. Rosenberg reports a family in which a grand-

father, father, two aunts and two sisters were afflicted with hyperthyroidism. Oesterreicher reports eight of a family of ten suffering with the disease. Bumstead reports a family in which four sisters suffer with Graves' Disease of varying degree. In one of my cases there is a history of the mother and grandmother having suffered with hyperthyroidism.

Age.—Though usually occurring after puberty or during the period of greatest sexual activity or active adult life, Graves' Disease has been seen in the extremes of ages. The disease is rare in the very young; my youngest case was a girl of fourteen. It is relatively more common in the aged; I have this year attended a woman of sixty-two whose hyperthyroidism, superimposed upon a simple goitre of many years' duration, had begun three years ago and whose thyroid was now undergoing malignant changes. I have at this writing under my care a man of sixty with Graves' Disease of moderate severity, of approximately nine months' duration.

Sex.—Graves' Disease is most common in women, but when this occurs in a man the progress is more rapid and the prognosis graver. Eshner, in a series of two hundred cases, shows one hundred and sixty-one females. This frequency in females as compared to males may be explained by the greater complexity and more profound changes occurring in the female sexual organs during the course of her existence. It is now widely recognized that the thyroid gland is intimately related to the organs of procreation, and that changes incident to puberty, menstruation, child bearing, and menapause are of necessity accompanied by changes in quantity and quality of thyroid secretion. A sluggish thyroid function in girls is coincident with a retardation in the development of the ovaries, with postponed menstruation and occasionally menorrhagia. The uterus and adnexia are in these cases underdeveloped. The administration of thyroid extract serves to check the menorrhagia.

Race.—Graves' Disease is most common in the Caucasian and Mongolian races. Though simple goitre is most common among negroes, hyperthyroidism is rarely if ever seen in this race. Of the many inquiries made of noted men throughout the country, only one clinician has seen a case of Graves' Disease in a negro. My observation indicates that the Hebrew has a rather high susceptibility to hyperthyroidism. The reason is probably the same as that attributed to the increased prevalence among the Hebrews of diabetes mellitus and neurasthenia, namely, a "high-strung" temperament.

Chronic Nose and Throat Abnormalities.—Enlarged diseased tonsils, adenoids, and nasal sinusitis are now recognized as strong predisposing factors. Now and then a case of hyperthyroidism will be relieved and occasionally cured by the removal of such tonsils and adenoids, nasal polyps, or the proper treatment of a sinusitis.

The Infections.—"Colds," tonsillitis, quinsy, rheumatism, influenza, phthisis—in fact, any profound infectious intoxication may lead to hyperthyroidism. Syphilis is a condition which must always be borne in mind, and a Wasserman must be made in all cases where there is the slightest suspicion of its existence. Tuberculosis is often caused by and associated with Graves' Disease, to say nothing of the frequency with which the two conditions are confused. This latter remark is not surprising in view of the fact that both diseases are capable of presenting an afternoon rise in temperature, profuse sweating, flattening of the chest, and marked wasting of the body. The wasting and diminished respiratory expansion occurring in Graves' Disease frequently lead to an active phthisis, especially where there has been a latent focus. Adolphus S. Knoff often meets with cases of young girls suffering with both enlarged thyroid and pulmonary tuberculosis. Bialokur finds that in 10 per cent. of his tuberculous cases there are symptoms of exophthalmic goitre — predominately seen in women (one man to ten women). Symptoms of excessive thyroid functioning may occur in the very incipient stage of pulmonary tuberculosis and seem independent of the gravity of the case and of the age. Bialokur is of the opinion that symptoms of Basedow's Disease may indicate the existence of a latent tuberculous infection and that successful treatment of the exophthalmic goitre symptoms may improve the pulmonary process. "Swelling of the thyroid occurs in 50 per cent. of early cases of secondary syphilis."—(Engel-Reimers.) Late secondary and tertiary manifestations of syphilis are said to be rare. These cases of non-toxic goitre respond very readily to local and internal iodine therapy.

Injury to the thyroid gland seems to be the exciting cause in rare instances; shock of operation elsewhere upon the body has also been followed by typical evidences of hyperthyroidism.

Iodine applied to the neck, and the prolonged administration of the iodides internally, will at times give rise to thyroid hyperactivity in persons whose thyroid function had been entirely normal, and occasionally Graves' Disease will develop through this cause.

The "Nervous" Temperament.—Persons of a sensitive, "nervous" or "high-strung" temperament are highly susceptible to the disease. Emotional disturbances, such as worry, anxiety, excitement, and prolonged physical or mental strain are predisposing causes. There is a remarkably clear indication that traumatic shock or fright is capable of bringing on Graves' Disease in persons previously possessing perfect health. In one of my cases, the man was seated in his back yard reading a newspaper one fine, warm day, when a "friend" suddenly approached from the rear and poured a cup of ice water down his back. The sudden fright resulted in a well-marked picture of hyperthyroidism two months later. In another case, the syndrome asserted itself some weeks after extreme worry over the death of a mother; in another (a woman of fifty), the symptoms gradually apeared after a train accident.

And so, again and again do we obtain similar histories pointing suggestively toward the emotional theory. Says MacKenzie: "Fright, intense grief, and other profound emotional disturbances have been recognized as causes of this pathological condition, but I do not think that sufficient attention has been paid to the very close connection between the chronic symptoms of Graves' Disease and the more immediate effects of terror. The description given by Darwin and Sir Charles Bell of the condition of man in intense fear might almost have been written with regard to a sufferer from this disease. The heart beats quickly and violently so that it palpitates or knocks against the ribs. There is a trembling of all the muscles of the body. The eyes start forward, and the uncovered and protruding eye-balls are fixed on the object of terror. The surface breaks out into a cold, clammy sweat. The intestines are affected. The skin of the face is flushed, down over the neck to the clavicles * * * Of all the emotions, fear is the most apt to induce trembling. There are one or two of the minor symptoms of Graves' Disease whose independent occurrence is well known. These are the pigmentary changes in the skin and hair, the falling out of the hair and epistaxis.

"Such being the condition resulting from severe terror, we have only to imagine the condition to become prolonged by a failure of the nervous system to recover its balance and right itself, and we have a more or less complete clinical picture of Graves' Disease. We have all the well known symptoms—trembling, palpitation, flushing, sweating, exophthalmos, relaxation of the bowels. There is no information that I know of in regard to the enlargement of the thyroid gland under the influence of profound emotional disturbance. All one can say on that point is that the enlargement which takes place in those cases where the symptoms develop rapidly after such disturbance makes it probable that this is actually the case. If this be so we have had associated with one another, probably as long as the human race and its ancestors have existed, the symptoms which we find in Graves' Disease. The existence of a certain abormal condition of the nervous system having been once established, we know how in time it becomes dissociated from its existing cause, rises to independence as a disease in its own right, and may require only a minimal incitement to set it off. In many cases the disease is started anew by severe mental shock; probably in a good many more it is the expression of an unconscious memory of the individual of some such shock in an ancestor.

"Such is what I would suggest to you as the origin and development of this very curious disease. It is likely that the alteration of the function of the thyroid body, whose importance in connection with the nutrition and the transmission of nerve force has been amply demonstrated, has a good deal to do with many of the secondary symptoms to which I have called attention, but the real disease is a widely distributed derangement of the emotional nervous system."

In this connection it may be remarked that soldiers under the unaccustomed physical and emotional strain are particularly susceptible to thyroid hyperactivity. The recent European war has engendered thousands of such instances many of which have been erroneously termed "shell shock." These men are exceedingly nervous, lose weight rapidly, and many complain of distressing palpitation and insomnia. Hysteria, melancholia, hallucinations and the manias are common. On examination, the thyroids of most of these men are palpably in-

creased in size, and though the number of cases of exophthalmos is small, tachycardia, arrythmia, and vasomotor instability are very common. Some of these raw recruits are doubtless suffering with nicotine poisoning as a result of excessive indulgence in cigarettes; most are subjects of early or well developed Graves' Disease and should be treated as such.

Having enumerated some of the etiological ideas regarding the mechanism of this interesting malady, the thought arises that since the physician's function in life is more the alleviation and cure of disease rather than the theorization of its pathology and etiology, what important facts can be emphasized from this paper to assist us in restoring the patient to his former health and utility?

1. In view of the multiform theories and possibilities offered to explain the causes and **modus operandi** of exophthalmic goitre, it is evident that the syndrome is the most complicated state of affairs which it is the privilege of scientists to investigate. Hence we must deduce that the thyroid gland is not the only organ involved, but perhaps assumes but a small part of the entire responsibility of the clinical picture or the chain of events occurring in the pathological physiology of the disease.

2. If such be the case, how can we expect a surgical intervention through thyroidectomy or some other surgical operation attacking a local area, to overcome a disease caused by such widespread etiological responsibility? Such an expectation is not only scientifically unreasonable, but has proved to be clinically inconsistent.

3. This clinical inconsistency, i. e., the failure of surgery to cure exophthalmic goitre is directly and indirectly implied in the various statistics offered by thyroid surgeons when they speak of mere "improvement" of some cases, not mentioning violent subsequent relapse; when they mention their percentages of "recoveries" and do not state whether they mean surgical recoveries or recovery from Graves' Disease; and finally their lack of data indicating complete, permanent cures of Graves' Disease through purely surgical intervention.

4. Complete recovery from Graves' Disease occasioned by the knife, is a clinical rarity. This is not only confirmed by my observations in diseases of the thyroid gland in institutional and private practice, but also by observations of many other internists of broad experience in endocrinology.

5. Properly applied nonsurgical treatment including dietetic, hygienic, medicinal (local and internal), electrotherapeutic measures, are capable of curing at least 75 per cent. of all cases of Graves' Disease.

6. In conclusion, I may say parenthetically that the details of the successful non-surgical treatment of exophthalmic goitre will be described by the author of this paper in a volume which is now nearing completion and which will be published shortly.

1714 North Seventh St.

Some Lessons Taught by the War.

Much knowledge has been gained during the war with regard to the treatment of wounds, and especially as to their prophylactic treatment. It has been shown that free and thorough drainage of septic wounds must be done and that irrigation with a suitable inhibiting agent as continuous as possible is a preventive measure of the first importance. In the case of wounds in which the anerobic bacteria predominate and which if not checked may develop into tetanus, such irrigation should be performed promptly. According to Dr. A. R. Fullerton, a well known English surgeon writing in the Lancet, March 6th, 1915, the most effective way of inhibiting the growth of anerobic bacteria is by means of oxygenation, and the readiest and most satisfactory method of doing this is by frequent irrigations with peroxide of hydrogen solutions. Fullerton further points out that this treatment is practicable in civil practice. Thus a fact long known to surgeons and general practitioners has been emphasized by war time experiences, the germicidal efficacy of nascent oxygen. The most convenient and thorough mode of evolving nascent oxygen, is to irrigate wounds with Dioxogen, because Dioxogen is the purest and most stable solution of peroxide of hydrogen procurable. Irrigation with Dioxogen by liberating oxygen inhibits the growth of germs, and is therefore to be recommended as a safe and dependable procedure in the treatment of wounds. And as Fullerton has well said, this method of treatment is as practicable in civil as in war practice, as witness the every day experiences of the thousands of American physicians who use Dioxogen in preference to any other antiseptic solution.

THE WORLD WAR AND THE MEDICAL PROFESSION'S PART IN IT.*

By J. N. Upshur, M. D., Richmond, Va.

The ultimate success of every endeavor in life is based upon the right start in the way of correct and broad foundation. The part played by medical men in the preparation and successful building up of an army is second to no other factor brought into use to this end. The soldier and sailor to be efficient must be physically fit from every standpoint else he is unable to stand the strenuous training needful in these modern times to give him the endurance so absolutely essential in the time of trial of every kind, in order that victory may be achieved. There must be a sound mind in a sound body. The province of the medical man is not bounded solely by his ability to successfully treat disease, or skillfully to handle the surgical problems arising as the result of wounds received in battle. A greater and more essential work is that in the domain of preventive medicine, first, sanitation of camps, being an intelligent direction of the most extreme health conditions of housing and feeding, being essential to the physical fitness of the army, as a corporate body, but in addition the knowledge of the individual soldier of how to preserve his own health that he may be clean and pure physically and morally. He must be free from disease resulting from dissipation and vice of all kinds. Therefore an essential of the army doctor outside of the professional knowledge so necessary, is the equal necessity, that he himself should have the highest ideals of moral righteousness, and the impress on him and the great responsibility that rests upon him to measure up to the highest standard of patriotism and duty, as being himself a God fearing man enlisted in a righteous cause. The part of the medical profession in the great war may be considered under three heads, preparation, prevention, cure, and rehabilitation, or reconstruction for self support and a useful life, that the loss to the body politic may be minimized to the greatest extent in the future life of those who have made the supreme sacrifice in a righteous cause. The starting point must be in the medical men themselves, a thorough preparation and training for the new duties devolving on them, proficiency in mental equipment for civil practice does not mean efficiency for military service, though skill in the departments of medicine and surgery, is essential, yet training in military system, discipline, ability to handle men, and the precise system which makes the whole machine run smoothly, and goes farthest in efficiency in the treatment of the sick and wounded. Nor is a fair amount of executive ability, the least of the important requirements. The history of the medical service in the Spanish war, except so far as it applies to the medical officers of the regular army, is a disgrace to the army and a blot on the fair escutchen of the medical profession. In the present great war, civilian doctors entering the army have been trained in requisite efficiency. Thousands who have entered the service as volunteers have made great and patriotic self-sacrifice in the surrender of large incomes to serve their country. Loyalty to the cause and the fire of patriotism in the heart, have made these men willing to do and dare to the utmost. Upon honor's roll are the names of many doctors who while nobly doing their duty in the relief of the wounded, have made the supreme sacrifice of yielding up their lives. A life is not measured by years but by deeds, and who will say that the life of men who thus die is not rounded and complete. The preparation in the formation of an army has two sides. First the environment of the soldier. In the largest measure the camp or cantonment where the soldier is trained should be conspicuous for its absolute healthfulness in every particular of the housing, ventilation, proper heating in winter, facilities for the preparation of suitable food. Hospital equipment in beds and bedding, diet lists and diet kitchens, bathing, etc., etc. Arrangements for quarantine and for handling the best way all contagious diseases.

The vice problem looms large with the soldier, prevention of this, from every standpoint, prompt physical treatment to prevent its ravages, but also the high moral standard of the doctor, by which he quietly exerts an influence for good on these men, and implants in them higher and better aspirations for a purer life. These men, hundreds of them are away from home for the first time in their lives and the restraint of home influence, and need guidance and a friendly hand. The man in the calling of the doctor who treats these moral conditions with indifference and speaks of it as unavoidable, and a matter of course, and sometimes

*Read at meeting of Tri-State Medical Association of the Carolinas and Virginia, at meeting in Richmond, February 19-20, 1919.

makes so grave a condition the subject of coarse and obscene joke, puts a stigma on the profession, and drags its robes in the mire of moral polution, shows himself to be unworthy of the great responsibility resting upon him, and should be scourged from the ranks of the profession with a whip of scorpions and to the tune of the rogue's march. But a wide and important field is in the means of prevention of communicable disease. The prevention of typhoid fever; the use of serum treatment for the wounded to prevent tetanus, at the first aid station, the discovery of the cause of trench fever, etc. The successful handling of the venereal problem. Careful examination shows that it is only half as prevalent in men after they enter the army as in similar groups of men in civil life, certainly no army has ever been mobilized which is as clean morally and free from venereal disease as the American army (Bevan, Jour. A. M., June 15, 1918). Of the health of the men during mobilization. To create an army of from three to five million men was no easy task. This mobilization had to be done rapidly. The medical profession could not accomplish the impossible. And yet look at the results. Japan held the record until the present war, with a mortality of 20 per thousand. In our mobilization, there has been less than ten. Our mobilization twice as good as that of any country up to the present time. Bear in mind that epidemics of mumps, measles, meningitis, contagious diseases among 2,000,000 men, the startling fact that the per centage of mortality has been less than the same number of picked men of the same ages, picked by insurance companies from civil life (Bevan, Jour. A. M. A., June 15, 1918). The relatives of men in the army may be content to know that there is no lack of skill of the very best, in caring for their loved ones, sick or wounded. The best men of the profession are in the army, fifteen per cent. of the profession of the whole country have volunteered.

The civil war created new words, with comprehensive meaning, skeedadle, carpet bagger, skalawager, their meaning was wide and comprehensive and no other terms could be as significant. In the great war, we hear new terms "the yellow streak in him," "the slacker," etc. The man to whom these terms are applied and who remains unmoved has the hide of a rhinoceros. The man in citizen's clothese available for service and who is dodging is eternally disgraced. The stain on him is like the spot on Aladin's lamp, the greater the attempt to rub it off the more conspicuous is the stain. In the ancient scripture Mera was cursed because the inhabitants went not forth in the fight in the cause of righteousness against the mighty. Yellow streakers and slackers must be inhabitants of ancient Mera. What soul is so dead that he is not thrilled by the accomplishments of the medical profession in this war? Not solely in professional lines of prevention and cure, in the duty well performed, in the part played in the building of an army such as the world has never seen before, but the courage displayed in the face of all danger, from disease, and on the battle field, members of the profession in this war have been first on the firing line, have gone farthest and been adjudged the bravest. Many have made the supreme sacrifice of their lives. Physicians of the southern states, many of whom, when the call to arms came, subordinated all to patriotism, and have made large sacrifices, personal and pecuniary. For the honor of the south I would call the roll and find none missing. In our hearts we know if we are not measuring up to the standard. When the opportunity to strike came, did we seize it? Like other great opportunities it has passed, sometimes repentance is sought even with tears but it is too late. A recent writer has said, "Kaiser turn back. You have missed your rendevous with victory. Those bayonet hands on Prussian clocks did not move fast enough. America is mightier than forty years of preparation. The guns that snatched Liege and laid Namur low shall never break the living wall that defends Calais, and blocks the road to Paris. Sheathe your mad dream, before it butchers Germany. Loan on our grain fields, ranches, steel mills, forests, money vaults and multitudes; count these impregnable strengths, then turn to your own paltry resources and beg for peace. You have spent your stalwarts, the peerless regiments of 1914 are gone. How may puny school boys and rheumy burghers succeed where such prime soldiers failed. Take stock, Austria is exhausted and querilous; Bulgar buzzard and Turkish vulture are already snarling for Balkan tidbits, chaos has snatched Russia from Judas. But France still answers blow for blow; British transports swarm seven seas, Italy remains inviolate, the allied fleets make mockery of Kiel, and we have just begun to strike. Behold the magic of the melting pot, witness what liberty can

do with peasant stuff in one short flaming year, with folk, kings counted cheap, and drove away to work autocracy's undoing. Ten million of the same breed that you ran from at the Marne must be reckoned with. Until we fill our oaths to sweep the earth of force and fear, and every race is captain of its soul, we are too proud to quit."—(Kaufman, in The Cosmopolitan).

And so the end has come, the arch murderer of the world is a fugitive and exile in a foreign land.

Are yon not straining at the leash that would keep you back from the honor and glory achieved in noble deeds for humanity and country. Well has Oliver Wendel Holmes sung in tribute to our noble profession whose deeds are crowned always by a spirit of sacrifice:

As life's unending column pours
Two marshal hosts are seen
Two armies on the trampled shores
That Death flows back between.

One marches to the drum's beat roll
The wide mouthed clarion's bray
And bears upon a crimson scroll
Our glory is to slay.

One moves in silence by the stream
With sad, yet watchful eyes
Calm as the patient planet's gleam
That walks the clouded skies.

Along its front no sabres shine
No blood red pennants wave
Its banner bears a single line
"Our duty is to save."

For those no death bed's lingering shade
At honor's trumpet call
With knitted brow and lifted blade
In glory's arms they fall.

For these no clashing falchion bright
No stirring battle cry:
The bloodless stabber calls by night
Each answers, "here am I."

For those the laurelled sculptor's bust
The builder's marbled piles
The anthems pealing o'er their dust
Through long cathedral aisles.

For these the blossomed sprinkled turf
That floods the lonely graves,
When spring rolls in her sea green surf
In flowery foaming waves.

Two paths lead upward from below
And angels wait above,
Who count each burning life drop's flow
Each falling tear of woe.

Though from the Hero's bleeding breast
Her pulses Freedom drew,
Though the white lillies in her crest
Sprang from that scarlet dew.

While Valor's haughty champions wait
Till all their scars are shown,
Love walks unchallenged through the gate
To sit beside the throne.

And so my brothers, let us one and all, be up and doing and when the last long roll is called, let none be missing in the ranks of virtue, honor and patriotic endeavor.

1103 West Franklin St.

Hernia of the Urinary Bladder; Notes of Cases, with Remarks on Strangulation of Femoral Herniae and Its Treatment—Blakeway (London Lancet) says that hernial protrusion of the urinary bladder is a comparatively uncommon complication of inguinal and femoral herniae. Diagnosis cannot usually be made before operation, though symptoms and statements of the patient may suggest it.

This difficulty of diagnosis and its rarity have led in many cases to injury to the bladder during operations for relief of hernia.

The author has operated upon five cases of hernia in which the bladder protruded. Three were males and two females. The ages varied between forty-eight and seventy-one years. All were on the right side, of the direct inguinal variety in two of the males, and of the femoral type in the other three cases. A sixth case was seen in which diagnosis was made without operation.

In all the cases operated upon, the relative position of the sac and the herniated process of the bladder were similar. The bladder protrusion in all cases involved the whole thickness of the bladder wall. It was closely applied to the inner side of the neck of the sac, and in each case was about the size of a walnut. At operation it was always found collapsed and might easily have been accidentally wounded or ligated.

Any thickening about the inner side of the sac of an inguinal or femoral hernia, especially if of long standing, should excite suspicion.

SAFEGUARDING THE HEALTH OF WORKMEN.

By W. H. Rand, M. D., Washington, D. C.

Groups of workmen need to guard, and to be guarded, against the particular health hazards incident to the special occupation pursued; for, since peculiar forms of risk appear in every dangerous trade, appropriate precautions are requisite to avoid them.

But risks are not the same in kind or degree in the diverse employments of an industry. Nor is the material handled by a workman the only source of potential detriment to his health. Workshop conditions are of equal importance, and certain processes of manufacture involve exposure to an unsanitary environment, while other occupations in the same establishment are devoid of danger. An entire industry is never amenable, therefore, to the indiscriminate and comprehensive charge of being insanitary in all its departments and in every branch of craftsmanship.

Dust.

It is true, for example, that all dusty trades are fraught with danger. But the degree of peril to which a man subjects himself by working in a dust-laden atmosphere varies with the amount and the species of dust. Flour dust, coal dust and lime dust are comparatively innocuous, while lead, sandstone and emery dusts always entail serious lesions when present in the respired air. But dust which in itself is relatively harmless may become the vehicle of a virulent infection.

Thus, street dust may convey the germ of tetanus(and house dust bear the tubercle bacillus on unseen wings to its nidus in the lungs of a transient guest.

A Dust Census.

Fifty-five distinct industrial processes are enumerated by Professor C. E. A. Winslow, in the execution of which the different workers are exposed to the pernicious effects of dust. The professor is apparently impatient with the supine tolerance of such a condition of things, for he says pithily, "The best way to deal with dust is not to have any. Where wet grinding or grinding in oil can be used instead of dry grinding, where paint can be rubbed with pumice and oil instead of sandpaper and the like, there is no danger from dust in the air." (Safety Engineering, August, 1913.)

Arrest and Removal of Dust.

Processes which are inherently dusty should be carried out by means of enclosed machinery, if possible. But such work as grinding and polishing with emery and buffing wheels must be done in the open workshop, and in these cases hoods and fans are necessary for immediate removal of the dust. In granite cutting and in some other occupations dust is everywhere, and in these trades, as Winslow remarks, the only way for the worker to be safe is to wear a respirator or wad of cotton wool tied over the mouth and nose. "It is hot and uncomfortable, but it is not half so uncomfortable as the cough and weakness of consumption."

Mr. John Roach, inspector in the State Department of Labor of New Jersey, read a paper at the 39th annual meeting of the American Academy of Medicine in which he cited, as an illustration of the benefits derived from sanitation, a record submitted to the department by the Secretary of the Polishers and Buffers' Union of Newark which shows that the death rate from tuberculosis in this trade was 50 per 1,000 in 1904, while in 1913 the rate had declined to 6 per 1,000. This improvement is explained by the fact that "The blower law which requires all buffing and polishing wheels to be provided with an exhaust system to remove dust went into effect in 1904."

The light of prophylaxis must be focused on one point—the prevention of dust inhalation. In stone cutting it is impossible to suppress the development of dust, on account of the nature of the material to be wrought. Moistening the stone with water or glycerine serves a useful purpose sometimes. But the dampened stone is said to become harder to cut, and, under the piece-work system of wages, the workman, in order to avoid the loss of pay by reason of a reduced output, neglects to wet the stone. Besides, this procedure is not always permissible, for certain kinds of stone change color when water and glycerine are applied to them.

Sommerfield remarks that the experience gained in the construction of the Mont Cenis tunnel demonstrates the influence which dry or wet stone may have on the health of the workman. On the Bardouche side of the tunnel the rock formation was wet sandstone, on the Modane side, dry sandstone. The machine men of Barduoche, for the most part, remained well, and many of them worked in the St. Gothard tunnel later. On the Modane side, they perished almost invariably of pulmonary diseases.—(Hygiene der Steinmetzen.)

Effects of Dust Inhalation.

A few years ago the Massachusetts

State Board of Health undertook to make a survey of Bay State industries in order to ascertain the facts respecting the prevalence of occupational diseases. (Sanitary Conditions of Factories, Workshops, etc.) The report of the Board shows that "stonecutters' consumption," due to the inhalation of granite dust, caused 44.5 per cent. of the 343 deaths occurring among stone cutters in the city of Quincy during a period of sixteen years.

The granite cutters themselves are held to blame for this high rate of mortality, and the comment is made that "Unless the workmen can be induced to protect themselves against dust inhalation by the use of respirators (which aids to maintenance of health are declined commonly by reason of the discomfort which their employment entails), there appears to be little hope of removing this industry from the list of dangerous trades."

Granite cutters are constantly enveloped in dense clouds of dust which fill and darken the sheds where the work is done. "A man working three or four feet from his neighbor can scarcely see him," writes Dr. Stewart of Barre, Vermont, where the main industry is granite cutting; and where, as might be anticipated, tuberculosis of the lungs is a prevalent disease. Not that granite dust directly causes tuberculosis, but it creates in the lung a condition favorable to the growth of the tubercle bacilli.

In the Milroy Lectures (series of 1915) E. L. Collis, M. B., H. M. Inspector of Factories, reviews the history of the conioses with special reference to "Dust-Phthisis." He affirms that silica is "present in every dust the inhalation of which has so far been found to predispose to dust-phthisis." Furthermore he observes that "the mortality from respiratory diseases among masons in various districts differs considerably, and this difference coincides with differences in the chemical composition of the stones worked. The masons in districts where limestones are worked do not suffer in excess from phthisis, and are at least as healthy as the community in which they live, while masons in districts where sandstones are worked suffer in excess from pulmonary tuberculosis."

This author's conclusions do not differ materially from those of other investigators. But there is a wealth of statistical tables in his report, and skiagrams are introduced which reveal ominous shadows in the lungs of workers in emery and silica dust; and, in contrast with these, a skiagram indicating the absence of any deposit in the lungs of a man who had worked for seventeen years as a limestone cutter.

It will be recalled by those who attended the 15th International Congress of Hygiene and Demography at Washington that, in the Massachusetts exhibit, there were displayed forty samples of vegetable, mineral, metal and animal dust; and that by means of photographs and photomicrographs the conditions of labor in the dusty trades were brought to light with startling vividness. The respective lesions produced in the lung tissues by inhalation of the several kinds of dust were also shown by a series of pathological specimens which accompanied the samples of dust, illustrating and demonstrating their morbific effects. The exhibit deeply impressed all that studied it with attention. The collection is now a part of the permanent exhibit of the Massachusetts State Board of Health.

To close with a practical suggestion, it is proper to add that Geradins has demonstrated a method of precipitating one sort of noxious dust by humidifying the air of the workshop. In plants where the air was loaded with lead dust he proved that he could make the floating particles disappear by filling the rooms with steam. But this expedient is certainly not available for application in mills and shops where fiber dust constitutes a health hazard.

In early boyhood the writer of this paper lived near a textile mill, all departments of which were accessible to him, and he recalls with wonder the leniency of a certain spinner who forbore to brain him when he would suddenly push open the outer door of the spinning-room, admitting a gust of cold, dry air which snapped many a thread of the spinning frames. It is a grateful memory that nothing worse than a volley of explosive epithets and sulphurous expletives ever greeted his advent on these occasions.

But a definite percentage of atmospheric moisture, requisite for the integrity of the threads in textile factories, is not incompatible with an adequate system of ventilation which is necessary for the operatives' health; and manufacturing corporations, as a rule, show commendable consideration for the welfare of employes by installing with alacrity the best apparatus and appliances that inventors can devise for the worker's protection.

1440 Clifton St.

IMPROVED TECHNIQUE IN SOME IMPORTANT EYE OPERATIONS.

By L. Herbert Lanier, M. D., Captain U. S. Army.

No one except an ophthalmic surgeon can properly appreciate the advancement and improvement that has occurred in eye surgery in recent years, and that this knowledge is not more general among medical men and the laity is easily understood, since these subjects are usually discussed only in meetings for oculists. But that it is a subject of exceptional importance to the profession and the laity alike none of us will deny, because many eye diseases now curable were until recent years considered partially so or not all amenable to surgical procedures.

Cataract.—The removal of senile cataract before maturity successfully is one of the most inspiring operations in surgery. But the operator must be cautious and not have infection, loss of vitreous, prolapse of iris, or the failure to remove all soft cortical substance at the time of operation. Iritis with adhesions and other complications will surely result, if any transparent cortex is left behind to become opaque and retard healing.

Dr. J. Ellis Jennings, one of my first teachers in ophthalmology at the St. Louis City Hospital is a pioneer in this particular operation. I do this operation and get good results, and make the evening of life more enjoyable to the afflicted ones, who need it so much.

Detached Retina.—The sclerotrephine operation for retinal detachment first employed in 1913 by Thompson and Curtin of New York, and by Parker of Detroit, has proven to be the best procedure yet discovered to effect a cure in these cases; except those where a high degree of myopia exist. All of these distinguished surgeons conceived the idea of using the trephine on the sclera. In these cases, after observing the results obtained by Colonel Elliot in treating glaucoma by his Cormeoscleral Trephining operation; their success has been phenomenal. This following Vail's pessimistic view expressed in 1913 seems very encouraging. His conclusions are that surgical detachment is not founded on scientific principles; that detachment of the retina is not a disease, but a symptom that the disease is a paralysis of functions of the ciliary processes, causing an arrest of aqueous secretion within the eye. His paper based on replies received from 281 oculists, 250 representing, according to the author's estimate, an experience averaging five cases a year, or about 25,000 cases in all, with the employment of every known line of treatment, "and not a single case of permanent cure in the lot." On the other hand, 31 oculists have secured cures; 25 each had a single cure; 4 secured 2 cures, and 2, 4 cures, making in all 41 patients reported cured. Two of these patients had detachment due to albuminuria in pregnancy, and they were cured after abortion. They should not be counted, a streatment is not applicable except in these unusual circumstances. This leaves 39 cures. In about one-half of this number the cure is not convincing from the records submitted, leaving, say 20 cases, or less than 1 cure in every 1,000 cases. The author considers that these figures show conclusively that there is no proper treatment for this condition.

Good results have been reported by various surgical measures from time to time, but in all of these, puncture of the sclera occupies an important place, and he would indeed be venturesome who asserted that the only cause of the improvement secured, was the scleral puncture. Casey Woods says: "Quite a number of brilliant and permanent cures have followed persistent treatment and a repetition of operations, in spite of these relapses * * * No surgical intervention should be undertaken unless all parties to it are willing to have the patient submit to repeated operations as long as there is a chance of recovery. Deutschmann, for example, has finally succeeded in several cases of relapse, after operating a dozen times or more."

Acting on the foregoing ideas, we have endeavored to secure permanent drainage by means of a trephine opening in the sclera, through which the subretinal fluid could be completely removed by aspiration with a small syringe. This aspiration could be repeated several times, if necessary.

Trephining for detachment has also been done by Walter R. Parker, and probably by others, with good results; but the incision of the choiroid heretofore practiced seems likely to lead to reaction and vitreous hemorrhage, so that aspiration has been substituted.

It is well known fact that the subretinal fluid in detachment tends to gravitate to the lower part of the globe. There are several points of doubt in connection with this phase of the subject, but it is probable that detachment is not a purely local process and that where several de-

tachments occur, their shape is determined by more or less imperfect adhesions between the retina and choroid, and that the entire area beneath the retina is to a certain extent in communication.

Corneal Transplantation—The present status of corneal transplantation is encouraging, while it has been practiced for over a century, until recently it has proven a failure, except in rare instances. A French oculist in 1789 attempted to transplant a piece of glass into the center of the cornea, and from this time on various other men tried glass. While some used celluloid and other transparent substances all with no success to speak of. One case retained the glass for two and one-half years before it sloughed out.

In 1824 the first atempt to transplant the cornea from one animal to another was made, by means of a trans-corneal Keratoplasty; this at first seemed successful, but later the eye sloughed out. Fuchs in 1894 operated on eleven cases, with little success, and my notebook made in 1909; while atending his clinic in Vienna records this quotation from him: "On account of the opacity of the graft and the penetration of new vessels, I gave up the project."

Large grafts with nasal and temporal corneal stitches to hold in place with atropine, and eye bandaged were partially successful, puncture of the anteriar chamber seems to be the leading cause of failure, loosening by lid movements: trauma of the graft by handling, and local necrosis from stitches were causes of failure.

Recent experiments have given up heteroplasty and foreign body transplants; hence autoplasty and homoplasty are the two types of operation through which success may come.

The present method used, and devised by Sidney Walker is to shave off the cornea to the required depth with Graefe cataract knife, taking as much as needed, pass 4 silk ligatures in the graft at its corners; suture it into the corneal cavity of the host, loosen up the bulbar conjunctiva from 7 to 4 o'clock, so that it can readily be pulled over the entire cornea without tension, and sutured with silk suture. 48 hours after the operation, the bandage is removed and the conjunctival flap loosened, the corneal graft will be clouded, but will become clearer; after 3 or 4 months there is little left to show how extensive the flap was.

Dacryocystitis.—The treatment of dacryocystitis has always puzzled ophthalmic surgeons, until recently. The old style treatment of passing the probe and irrigating the sac is not employed any more, if a cure is to be effected. Dr. W. R. Thompson asks: "Does it look as though a small probe passed through this duct filled with pus and granulations would be of any benefit?" Is it rational to suppose it would do any permanent good to fill the sac with a germicide, as long as the drainage is prohibited?" Reasoning along this line Thompson has devised a method to successfully clear the sac and duct of its obstruction usually at one sitting by making free opening into the lachrymal sac; by slitting the Canaliculus with a canaliculus knife. Then curetting inner wall of the sac with Buck's flexible wire ear curettes, through the duct passing the stricture clear into the nasal cavity. This treatment is logically sound, and will succeed in skilled hands.

Erythema Nodosum.—Marfan, in The Medical Press, London, points out that erythema nodosum was formerly classed among the rheumatic eruptions with polymorphous erythema and rheumatoid purpura. These two conditions are now recognized as constituting two distinct and separate groups, and erythema nodosum has been shown to be a disease standing in some sort of relationship to an acute outbreak of pulmonary tuberculosis. Erythema nodosum occurs only in tuberculous subjects, usually in those in whom the infection is still latent. It is the outward and visible manifestation of slight, attenuated, curable tuberculosis, and is of bacillary origin. The histological structure of erythematous tissue is typical "tubercles." The cuti-reaction is positive in these subjects and the formation of an exactly similar nodule can be provoked by injecting a minute quantity of dilute tuberculin into the dermis. Erythema nodosum is, then, a bacillaemia which can, of course, be recovered from, but which is none the less an outbreak of bacilliary infection and must be treated as such.

Pathogeny and Treatment of Cancer.—Cisneros recommends electroignition, which he has employed in cancer for eighteen years. He leaves the lesion open and proceeds against at the first intimation of recurrence. Electrical methods may be used also as adjuncts to the knife and one may look forward to 100 per cent. of cures in operable cases along with a considerable percentage in inoperable cases.—Semana Medica.

CORRECTION OF FRACTURES WITH THE AID OF THE FLUOROSCOPE.

By Samuel J. Sinkoe, M. D., Atlanta, Ga.

I wish to impress upon the members of the profession the importance of the fluoroscope as an aid in the correction and adjustment of displaced fragments of fractured bones. In numerous other conditions, e. g., diseases of the heart, mediastinum, lungs, location of foreign bodies, etc., it has a definite field of usefulness. In utilizing this modern scientific apparatus in fractures of bones, however, it seems as if the majority of physicians are drifting back to the ancient times when the medical profession depended upon the crowning signs of deformity, abnormal mobility, pain, loss of function, etc., for their diagnosis, and treated the condition the best they could by the use of various splints. The results obtained in some cases were good; in others they were disastrous. It is comparatively an easy matter to apply splints to a fractured extremity and watch for results, but the chief aim of any good surgeon should be proper replacement, proper fixation, and proper function, and without injury to the surrounding soft tissues.

The time has come, however, when the medical men ought to look in a different light upon the modern advances made in medicine, but even today, many men in the profession, depend too much upon their sense of touch in trying to manipulate the broken fragments into proper apposition. If good luck and fortune is with the operator, fairly good results can be obtained, but in a large number of instances a second, or even a third attempt must be resorted to if proper function of the fractured extremity is to be maintained, and which is accompanied by unnecessary anaesthetics, subjection of the patients to more pain, etc. I do not want to convey the impression that a fluoroscopic examination should be made in all cases, as for instance, fractures of small bones, e. g., metacarpal, phalanges, etc., but I do feel, however, that an X-ray ought to be taken even in these cases, before reduction and also after reduction, so as to be certain of results obtained. In the larger bones, however, e. g., femur, tibia, fibula, etc., where there is much deformity, a fluoroscopic examination should be the method of choice, for the reason that in not a small number of instances, where a single radiograph is taken, there is a possibility of error, particularly if the rays passed in the same plane as that in which the fragments are bent, whereas a fluoroscopic examination would show the fracture or deformity from different angles. In addition to this advantage, there is no necessity of a previous exposure and the development of the plate as in skiography, and the fractured bone can be examined and reduced quickly. At the same time it determines the best position of the limb for proper fixation.

Because of the danger of dermatitis, disturbances of excretion, etc., some authors are opposed to the use of the fluoroscope, but in my experience, in the hands of competent roentgenologists who understand the danger limit, there is very little cause for alarm.

The following case will illustrate the importance of the fluoroscope as applied to the treatment of fractured bones.

A. C., male; adult; age 23.

Family and past history negative.

Present History: While out riding in his automobile, patient sustained a fracture of his right femur, when his car collided with an outgoing street car. He was thrown violently to the ground, landing on his right thigh. When picked up he was unable to stand on the affected limb and suffered severe pain. He was carried to a local physician, where an attempt was made to reduce the fracture under an anaesthetic, but with little success. Another attempt was made and a plaster spica was applied, but the fragments slipped again. The patient was living at the time in a small town about 75 miles from Atlanta. After a few days he was brought to this city and referred to a local physician who would not interfere without an open operation. When referred to Dr. Fred Hodgson and myself, he had given up all hopes of having a useful leg again, having been subjected to frequent examinations and attempts at reduction. He was admitted to the St. Joseph's infirmary and an X-ray taken. The radiograph showed an irregular complete transverse fracture of the right femur at the junction of the lower and middle thirds with about 3 inches overlapping. An anaesthetic was administered and the patient was carried to the X-ray room. Steady traction was applied to the affected limb and an examination made with the fluoroscope by Barnes E. Sale, roentgenologist to the infirmary. The overlapping fragments were easily seen and brought together in as perfect position as possible, the leg being held in extension by an assistant. While still in the dark room, anterior and posterior

moulded splints were applied to the right femur, and the operation completed by the application of a Thomas traction knee splint. During the manipulation, several fluoroscopic examinations were made from different angles to convince us that the fragments were in apposition. The patient was returned to his bed in the ward and made a complete and uneventful recovery. At present there is no shortening and he is able to attend to his business having perfect use of his injured limb.

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Chronic Sinusitis in Soldiers.—Sterckmans (Archives Medicales Belges) relates ten cases of sinus disease illustrated with photographs and radiograms, and concludes as follows: These affections are very common, and while it is usually easy to locate an acute sinus inflammation, the reverse is true if the disease is chronic. This difficulty is due largely to the fact that in chronic affections we are often dealing with a polysinusitis. Treatment of these cases must be active and energetic and we must not shrink from opening up these cavities whenever such a course is indicated and even when drainage seems to be absent. The diagnosis must be exact and we should use every diagnostic resource available. Thus the author makes a thorough use of radiography and with good results. The method is very commonly neglected, but he cannot understand why for he finds it quite indispensable, especially in ethmoid disease. The writer has utilized the expert services of a colleague instead of trying to do his own work. There is considerable objection on the part of the soldier for fear of a bad cosmetic result, and even members of this profession are not without apprehension of this sort. The latter is unfounded, for in the great majority of cases healing of the operation wound takes place by first intention.

Legitimate and Illegitimate Children in Prussia.—In 1914 the number of legitimate births in Prussia was 1,067,408; of illegitimate births, 99,172. The death rate among the former was 2.85 and among the latter 4.47. The causes of death were congenital debility 35 per cent., diseases of the digestive tract 44 per cent., and the rest scattering.—Nederlandsch Tijdschrift voor Geneeskunde.

A NEW TONIC.

By Simon Baruch, M. D., New York.

To add another to the many tonics of more or less efficacy already known in the official and non-official pharmacopoea would seem unwarranted, were it not that the agent referred to in this caption is an old remedy in a new guise and clinical proof of its value is abundant in the writer's observation—Water.

A smile of incredulity or scorn may be elicited by this statement; one reason being that this agent is not enumerated in any work on Materia Medica or Therapeutics—another because "everybody knows all about water." That the first is true the reader may easily convince himself; that the latter is untrue I have hundreds of proofs. For instance—an eminent specialist telephoned me one day last summer asking if Hydrotherapy could be applied in a hotel. I said "Yes, if a tub, water, towels and a thermometer were available." He asked for a nurse competent to treat a patient with water. I did send a woman who had treated thousands of anaemic, tuberculous, neurasthenic and other patients in the iRverside Association Clinic for fifteen years. She discovered that the case was not a proper one for the remedial application of water.

In fact judging from my personal somewhat large observation, few medical men know aught of the tonic action of water. A fine text-book on Materia Medica just published offers one of the best chapters on the Brand Bath which by the way has gone into inocuous and to the patients fatal desuetude but writes not a syllable about its action as a tonic.

Far be it from me to inveigh against medicinal tonics which many physicians find of great value. They are entitled to their opinion, based upon clinical observation. I ask the same privilege for my new tonic—trial with open mind and without prejudice to recognized tonics, some of which may be more easily applied and therefore more efficient than water!

When I was practicing medicine in Camden, S. C., I began to use water as a tonic in tuberculosis cases which in 1878-80 were coming there as an overflow from Aiken which at that time had established a reputation for this class of diseases.

I remember a young man from Charleston with incipient pulmonary involvement who had been taking cod liver oil, iron, phosphates and other drugs without result. He was directed to live out-

doors as much as possible, and take ablutions every morning and afternoon as follows: While warm out of bed in a warm room, a linen towel was wrung out of water at 90 F., grasped at each end by the hands, thrown over the shoulder and moved to and fro over the back. Then the hands changed, the towel was dipped again and wrung out; it was again rapidly passed to and fro over the back. It was dipped again and wrung out, and the front of the body was thoroughly rubbed, followed by the same process over the thighs. The extremities were omitted. Each day the water temperature was reduced one degree until it reached 60 F. without the slightest unpleasantness to the patient. After each treatment he was dried and directed to spend half an hour or longer in the open air in fair weather. The improvement in appetite and nutrition was marked, the local manifestations subsided and he recovered. Since that time I have repeated these procedures with good results, not without some failures however, as has been more constantly my lot with other tonics. Here it may be mentioned that my mind shared the prejudice against Hydrotherapy which at that time was quite the vogue (as a reaction, I believe, against the enormous polypharmacy of that day). My predecessor as president of the South Carolina Medical Society had said "if men were fishes he could see some reason for this eternal washing, etc." I had however come into possession of a history of medicine in which was proved that water was an orthodox remedy on which Hippocrates had written a book "De Aqua et Locis," and which had been exploited by some of the most eminent physicians in ancient and modern times. This encouraged me to adopt the procedure above described which the great clinician Von Ziemmssen had recommended.

When I came to New York and became chief of the medical staff of the Montefiore Home for Incurables, the condition of admission being absolute poverty and incurability, I discovered that these desperate cases had already obtained the best treatment in hospitals which declined to retain them because unpromising and chronic. Not one of them had received any systematic water treatment. Here was my opportunity to treat "incurables" with water. And I proceeded with confidence to the task, seconded by my colleagues and the philanthropic directors who smiled graciously at my optimism. The records of that institution now harboring 700 patients show the result. In fact the institution is now called "The Montefiore Home and Hospital for Chronic Invalids." True there are not a large number restored to health, but Dante's "He who enters here leaves hope behind" no longer affrights patients and friends. It were unwarranted to claim that this result is to be ascribed solely to the application of water, for all modern methods are utilized. But the records show clearly the favorable comparative action of cool douches systematically applied in tuberculosis and some neurosis, hysteria, etc.

The records of the Lea View Tuberculosis Hospital (Report of Hospitals, Dept. of Charities, N. Y. City, 1917, April), present even more satisfactory statistics. Several cases were not subjected to Hydrotherapy until they began to fail.

In domestic practice, the simple method above described suffices but may be succeeded by affusions. These are administered in a warm room. The floor is protected by cloths or a rubber sheet; an empty large washtub is placed upon the latter. A small tub or large basin containing water at 90 F. (a thermometer is absolutely essential), and a few towels are made ready, also a large dipper. (In olden days I used a large gourd handle perforated). Water is dipped from the basin and dashed on the patient sitting in the tub (feet within or without) with force successively over the back, shoulders and chest several times. Patient is dried and sent into the open air. The water temperature is reduced daily one or more degrees until 70 F. are reached. Then the number of basins of water is doubled or increased more. If at any time the patient feels chilly after he is dressed, the next treatment must be of same temperature but only one basinful given, daily increased in number until reaction has been established. Treatment should never be abandoned on the patient's request. I treated a case in a small Virginia farm house in this manner last summer.

In towns so fortunate as to have institutions where water treatment is intelligently administered, the temperature, duration and pressure being arranged with precision according to the water treatment is more rapidly effective, if the gradual neurovascular training above described is practiced.*

Precision is demanded. The patient must not be advised to "wash with cold

*Principles and Practice of Hydrotherapy—Wm. Wood & Co. New York City.

water" but precise directions must be given.

I affirm without fear of contradiction that water is a tonic of great value.

[illegible] W. 70th St.

MEDICINE, SURGERY, HOSPITALS AND THE WAR

By Shearman Peterkin, M. D., Seattle, Wash.

Prior to this war various evolutionary forces, without intelligent aid or organized assistance on the part of the medical profession, gradually compelled and are still compelling the followers of medicine into:

1. Accepting the specialist.
2. Demanding hospital facilities.
3. Associating and segregating into more or less organized groups.
4. Establishing private clinics, as the Mayo Clinic and similar institutions.
5. Establishing, as just instituted by Columbia University of New York, a still more advanced form of scientific medical organization, a clinical laboratory.

The same evolutionary forces have caused the laity:

1. To form mutual benefit organizations for the sick.
2. To demand contract practice.
3. To form hospital associations.
4. To demand state aid.
5. To demand free clinics.

In every one of these vitally important politico-economic movements, and in view of the fact that millions of men will return after the war and demand for themselves and for their families the same scientific treatment they have experienced under military organization, medicine as a profession has failed to recognize the same exciting cause in each instance—an economic demand that the theoretical standard of efficiency "Medical Ethics" must be replaced by a more practical standard, "Ethical Economics." This standard demands the application of scientific methods through economic organization to every-day life, so that efficient medical and surgical treatment will come within the reach not of the few who can receive hospital treatment in standard institutions but of every human being.

Confronted by the above politico-nomico facts, a very pertinent question presents itself to the medical profession at large: What is medical organization —medical education—doing to solve these problems, at a time when an imminent reconstruction period confronts every form of organized society including the profession of medicine?

Based on observation and experience of 20 years the writer claims that virtually nothing practical has been systematically undertaken.

Nowhere is there evidence that medical organization—medical education—has ever recognized three basis psychologic factors that govern all inteligent human acts:

1. One hundred per cent. of the representatives of medicine, physicians, are human beings, and the minds of the highest and lowest are compounded of the same elements, held subject to the same laws of action; and the knowledge that any one of them possesses comes—as it does to every other human being—through the ordinary channels of the senses.

2. In the search for knowledge in every branch of human society ,including medicine, science has produced innumerable mechanical aids to increase the efficiency of the senses of man. Therefore logically, all things being equal, the mind of man gathers knowledge in proportion (a) to the number of mechanical aids employed to increase the efficiency of the senses; (b) the accuracy with which these aids are employed.

3. As a rule normal human emotions govern every human being, including the physician. Therefore, if the recompense for labor does not enable the physician to carry overhead expenses; does not give him time and funds for improvement, study, travel and necessary recreation; does not produce profit that is protection for his family and for himself in sickness and old age; he can neither give efficient scientific service nor continue to progress. If adequately recompensed he can give scientific service far more readily and is more likely to progress.

Yet in the face of these obvious evolutionary politico-economic movements and the basic psychological facts that govern intelligent human action, medical education is still demanding for every individual admitted to the study of any branch of the science and art of medicine a high standard of preparatory education, in substance a B. A. degree from a recognized educational institution.

This standard, combined with the principles of education that are employed in every medical college after admission to study is such that it can be justly claimed that the educational methods pursued tend to make the graduate phy-

sician in this work-a-day world pursue the practice of medicine as a pure science, that can isolate itself, that needs no association with the applied sciences, especially economics. For instance, medical education during all these years has apparently never conceived of the practical necessity of recognizing the psychological fact No. 1 at a pre-educational factor of utmost importance.

The United States Government, on the other hand, by the present war has been uncerimoniously forced into recognizing its educational value—as evidenced by the first standard of admission to the aviation service, where the highest possible human skill is required in order to successfully destroy life. In this initial examination the most accurate possible physical and mental tests are employed in order to ascertain not only the inherent character and personality of the candidate, but more especially the acuteness, stability and durability of every one of his senses.

In the profession of medicine, however, where there is a demand, if it were possible, for even greater character and personality, acuteness, stability and durability of the senses—the object of the physician being to preserve life—no recognition is given to the fact that efficiency in applying abstract knowledge depends upon the efficiency, not of one but all of the special senses.

The student of medicine may be deficient in one or more of his special senses, have little tactile sensibility, a poor sense of smell or hearing, defective eyesight, little character and no personality adaptable to a physician. Yet no tests are made to ascertain or correct these defects, and the student is graduated and permitted without any organized supervision to try to preserve—where he would not on the same grounds be permitted to destroy—life.

As to the educational value of the psychological fact No. 2, there can be no question that the mechanical aids to scientific medicine (which include all laboratory methods, even history filing and compilation may be added) have become so numerous, have so developed in detail that to attain efficiency requires not general but definite technical knowledge.

There can be no question that medicine will become organized in the future, and when so organized it can be no exception to the general rule and must attain efficiency by having sub-division of labor—therefore organization of labor and equipment.

Medical education as conducted today may be ethical but it is still decidely theoretical. Medical schools virtually only graduate officers and then only colonels. No provision is made for officers of lesser rank, for the privates in the form of technicians. For privates, we as a profession, must take the unsuccessful physician, volunteer nurse, half-trained office girls, or any kind of unskilled help available, whom each physician must train for himself after his own sweet will in order to fill the ranks of scientific medicine with privates. Yet economic organization is staring the profession in the face. With this army thus organized we guarantee to defend the public from disease—then wonder why our efforts as a profession are not appreciated!

Even the colonel, who may later wish and be willing to work for a higher rank —for instance to become a specialist— there is no institution provided where through concentration of skilled leaders, equipment, technical assistance and economic organization he can learn his specialty from A to Z, and be instructed and equipped with a modified plan of economic organization, whereby he can do justice to the public and his profession by maintaining and delivering the high standard of goods which he advertises to sell in competition with the inferior grades of the cults by attaching to his name an "M. D."

As a profession, in most of our medical colleges, we unquestionably try to manufacture a high standard of goods, which goods must be sold in the open market to the public. We adevrtise to the public that the sign "M. D." signifies the highest standard. Yet as a profession have we adopted any organized means whereby we can demonstrate to the buyers, the laity, the value of standard "A" as compared with the imitation "B," and in so doing increase the demand for standard "A" goods, to the benefit of both producer and consumer? I think not.

The public through universal education is being taught to think, to reason, yet the medical profession today, like the cults, is asking the public to accept goods on good faith without investigation; and we claim as a standard science based on reason, not wholly on faith.

If the profession of medicine will not undertake to solve these politico-economic problems for itself, it is true that evolutionary forces will solve them for us, but with brute force and a corresponding indiscriminate destruction—unless

man employs the intelligence that nature has given him to anticipate evolutionary movements, through the use of intelligence scientifically applied but governed by the higher human emotions.

It is not within the limits of this paper even to outline the means to the end that experience suggests. But the old adage always proves true that where there's a will there's a way.

The Vibrating Sensation in the Differential Diagnosis of Affections of the Spinal Cord and Peripheral Nerves.—Williamson, in The London Lancet, calls attention to the value of the vibrating sensation in the differential diagnosis of affections of the spinal cord and peripheral nerves from hysteria, functional diseases and malingering.

He tests the vibrating sensation by a large vibrating tuning-fork, the foot of which is placed on a subcutaneous bony surface, such as the malleoli, the inner surface of the tibia in the leg, the anterior superior iliac spine, the styloid process of the ulna at the wrist, the sternum, etc.

Loss of vibrating sensation is often one of the earliest signs of sensory affection in lesions of the spinal cord. It is often lost before other forms of sensation are affected.

In the differential diagnosis of organic paraplegia from hysteria, functional disease, and malingering, he calls attention to the following point. In any case of paralysis or paresis of the legs, if the vibrating sensation is lost, while other forms of sensation are recognized, and the patient persists in this statement in spite of suggestions to the contrary, malingering or hysteria is very improbable. In malingering or hysteria, if sensation is affected, the vibrating sensation and other forms of sensation will usually be lost together.

Vibrating sensation has been lost in cases of spinal disease which have come under the author's observation that were probably due to combined pos erolateral degeneration and lost at a very early stage before other forms of sensation had been lost. He quotes the case of a man called for military service in 1917. The patient stated that he considered himself unfitted for military service because of a weakness or heaviness in his legs and slight unsteadiness in walking could have been attributed to neurasthenia or malingering but for two signs. The knee-jerks were normal; no ankle clonus could be obtained; and the only definite sign of organic disease was the loss of the vibrating sensation on the legs and the change in the plantar reflex. Six months later he showed well-marked signs of organic disease.

Williamson calls attention to the value of testing the vibrating sensation in the numerous cases of lesions of the cord and peripheral nerves now coming under observation in military practice.

Bismuth Iodoform Paraffin Paste in Recent Gunshot Wounds.—Colledge and Drummond, in The London Lancet, have employed this paste in connection with the surgical treatment of recent gunshot injuries in a large number of cases and set forth the following as the advantages of the method: The wound can be sutured, making prolonged drainage unnecessary and usually avoiding suppuration; no change of dressings is required, permitting prolonged rest and avoidance of pain; the facility of transport is greatly enhanced and its discomfort much decreased, especially is this true in cases of compound fracture; finally the liability to gas gangrene is diminished. The technic so successfully employed by the authors begins with a primary thorough cleansing of the entire wounded part with ether soap. The wart is then surrounded with dry, sterile towels. The superficial wounds are excised and the deeper ones opened widely; all foreign bodies and fragments of bone are removed and devitalized muscles are excised. Bleeding points are caught with Spencer-Wells forceps and the raw surface is then swabbed with methylated spirit. Following this a paste of two parts of iodoform and one of bismuth subnitrate in enough liquid paraffin to make a thick cream is smeared all over the surface of the wound, including the ends of bones, with a piece of dry gauze. The paste is well rubbed in so as to form a thin film on the surface and all excess is removed. The clamped bleeding points are then ligated, gaps in the muscles are closed by catgut stitches when necessary, and the wound is sutured with sterile fishing gut. A dry gauze dressing is applied and covered with wool. If the outer dressing becomes saturated with discharge it may be changed, but the inner layer of gauze is left in place. The treatment is usually followed by a general reaction with fever lasting for one to two days. The method has not been followed by any cases of iodoform or bismuth poisoning, probably due to the use of relatively small amounts of the paste. It has proved of great value in all forms of infected wounds as well as in amputations.

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THE PRODUCTION OF HYPEREMIA.

We recognize nature's reparative process in hyperemia, and depend upon this activity of circulation in many conditions to decide the balance in favor of a return to health. Nature's effort in many instances tends toward this, but in a large number of conditions the effort appears to end with a congestion or circulatory stasis, to cure which it will be found necessary to produce an artificial hyperemia. For a number of years hyperemia has been produced by a method known as Bier's, by the use of small suction apparatus, and in local conditions it has proven fairly satisfactory. The old cupping method is still in use to a lesser degree than formerly, and this also has proven its value in a certain type of cases. In arthritis this is still resorted to by many who have no better methods at hand. Fortunately at this present day we have far better ways of bringing about hyperemia in the various parts of the body, and some of these are available to most practitioners.

For surface hyperemia we have the use of the high candle power lamp as an available method. This lamp must be of the carbon filiment type in order to get the strong heat rays, the short infra-red rays, and placed in a hood of the proper parabolic type to throw the rays in parallel. This lamp may be suspended above the part to be rayed, or held in the hand pointed toward the part. The 50 c. p. lamp, though small, has sufficient power to produce a very active hyperemia in a few minutes, and is most satisfactory. If a larger lamp with a correspondingly larger hood should be used, it will require suspension for convenience of the operator. Another type on the market is that in which a number of lamps are placed in a hood shaped to hold them, but still throwing the rays in parallel. This is a long and narrow one in shape, with standards to hold it in position, so that it can be placed over the area to be treated.

Another method of producing a surface hyperemia is by the use of the vaccum tube, charged with the high frequency current, taken preferably from the Oudin solenoid. This current, by the short spark irritation, heats the surface quite rapidly as the tube is played over the surface to be treated. This is called the "violet ray" by laymen and those physicians who have received their instructions from the instrument makers, as to the use of their apparatus. To the physician who knows his work and is properly trained, this appellation shows the ignorance of those using it. Were it proper, the color of the ray would be always of the violet color in the tube, when in reality it is more often a pale blue, and whatever color it happens to be, it is according to the amount of vacuum of the tube. It is violet only in a low vacuum tube, and these are in the minority.

This form of treatment is very popular at present, owing to the great number and varieties of small high freqeuncy machines upon the market, and is used for all purposes by those who purchase them. Fortunately they are not devoid of usefulness, as they are capable of producing a good degree of active hyperemia.

For a deeper hyperemia, we have the use of diathermy, which produces the most active and complete type, and to any extent and degree. This is from the use of the high frequency current applied by the use of two metal electrodes, flat in type, and made of flexible metal, which can be molded to the parts. The two plates are placed upon opposing sides of the body, being connected to the two poles of the machine. The amount of current must be guaged by the effect desired and the tolerance of the patient. This method, as can be easily seen, will produce an activity of the circulation in the area between the electrodes such as no other method can possibly do, hence its great usefulness.

One other method of producing hyperemia is that of baking. This is generally known, so will need no description, but its value is limited, it being of far less utility than the diathermy. Perhaps its greatest usefulness is in the treatment of local infections, such as surgical infections of the hand or arm, and in these cases, its value is unsurpassed.

It is to be hoped that this short resume of this subject may help some toward a better understanding of the subject, as it has the greatest value in our care of the ills of the human frame. M.

EATING TO DIE.

The Golden Rule in the use of food is eat to live not "eat to die." In this connection it is interesting to observe how little food animals or human beings actually require to sustain life, and how on the other hand many diseases, and incidentally many deaths are caused by excessive eating, overloading with too much food will produce not only disease of the digestive organs, but also disorders of metabolism, like obesity, gout and diabetes, and in this way life is shortened. People especially in this country eat too much, and a large majority of them ingest a surplus from the cradle to the grave, consequently they are "dyspeptic" in later life and you find them seeking help for overtaxed eliminative organs. Past gastronomic excesses are in some instances responsible for cancer of the stomach. This terrible disease is increasing materially in relation to the total number of deaths from all causes; it is increasing more rapidly than any other disease, and the increase is greatest in the most prosperous classes, and is making its attack at the highest productive period of the individual. Moderation in diet is a great virtue but if carried to excess it becomes a vice. Faulty and insufficient feeding leaves its imprint first upon the growing child, the half starved boy or girl is easily fatigued both mentally and physically, and are unable to resist the millions of bacteria which we are constantly subjected to by day, and by night, and quite naturally they fall easy prey to disease. Those who are seeking to retain their health as well as those who desire to regain it must observe simplicity in their diet. The influence of exercise in the process of digestion should be considered. Beaumont, from his observations on St. Martin came to the conclusion that gentle exercise by increasing the rapidity of the circulation may aid the secretion of the digestive juices, and stimulate the movements of the stomach. For those possessing a good circulatory apparatus, exercise is always beneficial. Many a miserable dyspeptic has been cured by a daily walk of several miles in the fresh air. The combination of fresh air, exercise, and sunshine is good medicine for the prolongation of life. The out of door muscle worker has several conditions favorable to vigorous digestion on his part, and will enjoy good digestion in spite of faults in the manner of eating. The office man, and the brain worker is the one who is most likely to be dyspeptic. When a man is mentally fatigued he should ease up, slow down or come to a full stop in his work, and so it goes—we eat to live and we eat to die.

TWENTY-FIRST ANNUAL SESSION TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA HELD IN RICHMOND, VA., FEB. 19-20, 1919.

Organized by leading medical men of the three states, in large measure at the instance of the South's most illustrious surgeon of his generation, the late Dr. Hunter McGuire, this excellent medical society held its 21st annual session at the Hotel Jefferson, Richmond, Va., February 19-20, under the presidency of Major Robt. S. Cathcart, Charleston, S. C.'s well known surgeon.

For a war meeting of a medical society, over fifty per cent of whose members entered the service, and the large majority yet with the colors, the attendance was good, while the papers and discussions, always of a high standard, were fully in keeping with the association's past record.

Governor Westmoreland Davis of Virginia, welcomed the doctors in a graceful address which was fitfully responded to by Dr. J. P. Monroe, Charlotte, N. C.

Major Cathcart's Presidential Address was a thoughtful consideration of the necessity for standardization of the work of hospitals and replete with sensible suggestion.

In the treatment of his subject he evinced full knowledge of the more-than-ever vital hospital question in its relations to both profession and community, taking the proper, even if a trifle advanced position that "there is no hospital, however small that has a right to exist unless it can meet certain minimum standard requirements. Every patient is entitled to the best of medical service. The right to health today is as great as the right to life. The right of health is the right of society.

"All hospitals are public service institutions. There is no such thing as a private hospital as regards their records and end-results, although privately owned. In other words, a state or community should inspect and report to the public, at stated intervals, the conditions and end-results obtained in every hospitals in their community, as is done in the public inspection of schools, milk and food supplies, and sanitary conditions of public eating places, factories, etc."

An elegant banquet was tendered the members of the association and invited guests at the Commonwealth Club Wednesday evening.

Officers as follows were elected for the ensuing year: Dr. Robert C. Bryan, President; Dr. Clifton M. Miller, Vice-President for Virginia; Dr. A. J. Crowell, Charlotte, Vice-President for North Carolina; Dr. A. R. Taft, Charleston, Vice-President for South Carolina, and Dr. Ralph E. Hughes, Laurens, Secretary and Treasurer. The association will meet next year in Winston-Salem, N. C., third Wednesday of February.

ADVERTISING PHYSICIANS.

The saying, "All men are created equal," is not a part of our religion. It is not a part of any religion. An irreligious man was the author of it. But the American people regard as sacred. Perhaps this may be partly on account of the importance of the document of which it is a part. But it is more attributable to our familiarity with it. Whatever is said over and over many times comes to be regarded as sacred, and people do not question it. They accept it.

But all men are not created equal. Most scholars now believe that man was not created at all, but evolved from lower forms. But however this may be, whether man was created, or evolved, or has always existed, it is very certain that we are not all equal. Some men rise from the utmost obscurity to the greatest eminence. Some others fall from the most favorable opportunities to obscurity and oblivion. Some farmers grow rich on the poorest land. Some others grow poor on the richest land. Some speculator rise from the most meager beginnings to the greatest fortunes. Some who have inherited fortunes go down to bankruptcy and ruin.

And the differences between physicians is as great as the differences between men of other occupations. Some can diagnose most any case that presents. Some others seldom make a correct diagnosis. Some go through the great epidemics without a death. Some others while doing no larger practice report many deaths. The diagnoses of some physicians are mere guesses and their therapeutics nothing but placeboes. Still others, sad to say, both ignorant and reckless, actually cause deaths of patients that would survive their sickness if they had no physician.

The public ought to understand these matters, and learn to choose physicians on rational considerations. If they did so the best physician would be the first choice of all the people. But as it is the most inferior physician is quite as apt, if perhaps not more apt, to have the largest practice. If the superior physician does hold some practice, as he should, it is most likely because of some ulterior influence. Religion, politics, family connections, being the oldest physician in the place, or perhaps being the newest in the place, and many other influences count. If he has nothing to sustain him except the fact that he produces the largest per cent of cures, then he is doomed.

When one or more physicians have failed to cure a given case, and another physician succeeds, it ought to count for something in the community. But it is the rarest thing entirely that the beneficiary of such service patronizes his benefactor thereafter. He seems to regard the result as a mere chance, still adhering to his prejudice that the physician of his former choosing is the best any how.

There ought to be some kind of an advertising arrangement by which the public would be forced to recognize which physicians actually produce results and which ones do not. As it is those who advertise most get the most money. But their patients do not get the best value for this money. Then there are physicians who get themselves advertised by indirect means, and draw many customers, and amass fortunes. But even this financial success does not indicate proportionate merit. The most obscure physician, the one who has the least practice, and gets the least money, may produce the largest per cent of cures. Perhaps this is the rule. He can give more time and study to the cases he has.

The attention of the people should be directed to the actual results produced by the several physicians who compete for the patronage in any community.

THE SCIENCE OF MORALITY.

The most excellent address of Dr. Lanier upon "The Preservation of Public Health in the February Journal might well have been entitled, "The Science of Morality." But such a grouping of the words science and morality would be open to the criticism that any standard of morals that is not strictly scientific, is not morality at all; and that a science that is not moral, is not scientific. Nevertheless the broad view of morality that Dr. Lanier presented, is the soul of the science of life that he talked about.

Science—a scientific discussion of public health must deal with the old tin can in the garbage heap. That tin can is representative of the mind of the community, and the mosquito that comes out of the tin can, is the community mind made over into matter. Many long tiresome essays have been written trying to explain just how the mental becomes material. Dr. Lanier explains the materializing process in a very few words.

Science—the logical conclusion of Dr. Lanier's address is simply this: The mind that permits the dishonoring of fundamentals—the mind that permits the pollution with noxious substances of the air that men must breathe; that permits the pollution of water supplies is not a scientifically acting mind. And just so, the mind that allows brain cells to become so demoralized that they invent and project immoral ideas, is not a scientifically acting mind.

Probably all of science and all of morality is summed up in the word "eugenics," that the Dr. Lanier discusses. At any rate the next to the most to be pitied person in the world is the pure, educated, refined woman who has had to go through life without a husband. The most to be pitied, is such a woman who has had to go through life with a husband who has been entirely unworthy of her. And it comes to this, that a person who is intel , morally, and physically fitted for home-life—when such a person is not a partner of a home, the fact discredits scientific care on the part of the community. The old tin can is at work breeding something! Possibly the double standard of sexuality—more than likely this thing makes the sensitive nature of the woman that education and refinement has brought about afraid to play the game of matrimony! There are other standards—double standards. The standard of the use of narcotics by men, and by women. Dr. Lanier mentions these standards. Plainly enough the use of tobacco and alcoholics do not repel the users from a certain class of women. But it is cold scientific fact that the sensitiveness of education and refinement is repelled by those practices; and the people that permits the giving of offence in this highest sphere of life, will some time reap slumdom!

Dr. Lanier has pointed out a great truth. There ought to be more of him.

VENEREAL DISEASES.

As the spotlight of publicity has been turned on venereal diseases, and the attention of the general public has been directed toward the destructiveness, misery, and suffering that follow venereal diseases, the medical profession must assume absolute responsibility for permitting a certain proportion of these cases to go abroad and spread the disease without due regard to the consequences that will result. All physicians who treat venereal diseases and especially gonorrhea, should adopt a standardized series of tests that are to be made before the patient is discharged as cured. Too little attention, by most physicians, is paid to the positive cure of this disease that has infected so many innocent women and children. Too many physicians consider that when the discharge has stopped, the patient is cured, and do not use the scientific methods of seeing whether their patients are free of all Neisserian infection. How much untold suffering, pain, wretchedness and unhappiness can be laid at the door of the careless physician.

To illustrate this point more effectively, one case out of the many thousands can be brought to bring this question home to every physician that is doing venereal work. The case in point is this: A young man became infected at his first intercourse—went to a reliable physician, as he thought, and was dismissed as cured. Three years elapsed between the time that he was cured and his marriage. In the interim no intercourse had been indulged in. After a few weeks of married life, his wife was compelled to consult a physician who diagnosed the case as acute Neisserian infection. The husband at first attempted to accuse his wife of unfaithfulness but fortunately, the physician who had his wife's case, insisted upon examining him. On examination they found several urethral crypts inflamed with the gonococcus. This, in itself, was a terrific blow but that was not half the suffering he and his wife had to undergo. It was necessary to perform a laparotomy on his wife and the tubes and ovaries had to be removed. As this couple had anticipated the pleasure of having children, they were plunged into the greatest grief when the truth was told them. What a different story would have been told, had his physician thoroughly tested him before he had discharged him as cured.

How many cases like this can be found in the United States where the physician has neglected to do his full duty by his

patients. With the Gonorrheal Fixation Test at our disposal, together with the electric endoscope, massage of the seminal vesicles and prostate the tests with different drugs such as nitrate of silver, microscopical examination of the secretion from the urethra and prostatic urethra no such terrible diseased condition should be allowed to grow.

Yet censuring the physician, there must be a word said in his defense for it is not always his fault as a great many patients, who contract gonorrhea will not co-operate effectively with the physician after he himself considers them as cured.

As the Public Health Department is attempting to enlist physicians in their fight against venereal diseases, it is to be hoped that every physician will give them his hearty support and that their co-operation will be active and effective which can be brought about by realizing the seriousness of the situation and the responsibility that rests upon physicians.

EDITORIAL NEWS ITEMS

The Public Health of North Carolina.—Commenting on what the recent Legislature accomplished, Governor Bickett includes what was done in the way of public health one of the three of the most important.

The Governor said:

The general assembly made tremendous strides in health legislation. The steps taken for the protection of the health of this and future generations in themselves abundantly justify the existence of the present session of the general assembly.

(1) In my opinion the most important and the most advanced step taken in the domain of health laws is the statue that gives authority to the medical staffs of our penal and charitable institutions to perform operations on inmates of these institutions that will make it impossible for incurable lunatics and imbeciles to "multiply and replenish the earth." The law carefully safeguards the patients and these operations can be performed only when in the judgment of the medical staff they will redound to the benefit of the patients. This law is the very essence of humanity in so far as it affects the individual patient, and is the only way to bring about a gradual decrease in the number of these unfortunate people.

(2) The act that calls for the regular examination of every child who attends a public school in order to ascertain the existence of either physical or mental defects and the appropriation of $50,000 per annum to correct these defects in indigent children breaks new ground in this field of legislation. This law is bottomed on the sound principle that Christian civilization cannot allow a child to stagger through life under the handicap of a curable physical or mental defect simply because the parents of that child may be stricken with poverty.

(3) The law making it mandatory to maintain in all towns and thickly settled communities sanitary closets in accordance with plans and specifications prepared by the state board of health, means the saving of nearly a thousand lives a year, the prevention of ten thousand cases of sickness, together with all the suffering and expense incident to sickness and death.

(4) North Carolina has for several years been the leading state in the union in the development of rural health work. The appropriation for this work was practically doubled, and this means increased activity and efficiency in this great field.

(5) A series of acts was passed for the purpose of co-operating with the federal government in the suppression of vice and the prevention of diseases incident to vice. The measures are as follows:

(a) The education of the public by suitable means regarding the cause and prevention of unhygienic sex life and general diseases.

(b) The furnishing of free salvarsan, the specific for syphilis, for the treatment of all syphilitics of the state, and for free treatment of persons diseased with gonorrhoea, and syphilis, in order that these diseases may not be transmitted to others.

(c) Making prostitution a dangerous practice in North Carolina by enacting laws that will reach the prostitute, and providing the necessary law enforcing agent to see that the laws are properly applied.

The Robeson County Medical Society held a meeting in Lumberton, N. C., on March the 8th. At this meeting the following officers were elected for the ensuing year: Dr. W. E. Evans, President, Rowland; Dr. T. C. Johnston, Vice-President, Lumberton; Dr. J. A. Marti, Secretary-Treasurer; Lumberton.

The next meeting of the Society will be held in Rowland the first Wednesday in May. This meeting wil be devoted entirely to the discussion of Influenza.

Dr. R. L. Payne of Norfolk, Va., has been appointed Chief Surgeon of the Virginia Railroad. Dr. Payne is a North Carolina surgeon by birth and is a son of the late R. L. Payne of that city.

The Secretary of State, Raleigh, N. C., has chartered the Crowell Urological Clinic, Charlotte, N. C., with a capital stock of $25,000.00. The incorporators are the well known G. U. Specialists, Dr. A. J. Crowell and his associates, Drs. R. J. Lafferty and J. D. Elliott, all of Charlotte, N. C.

Lt. Col. E. C. Register, M. C. U. S. Army, a native of South Carolina, and for some while Camp Surgeon at Camp Greene, Charlotte, N. C., has recently been ordered to assume the duties of port surgeon at Charleston, S. C. Colonel Register is well known to many of the Carolina medical profession both in and out of the army circles, and his frequent promotions, deserved as they undoubtedly were, are sources of pleasure to his many friends and admirers. J. H. W.

Golden Jubilee Victory Celebration Meeting.—The fiftieth annual meeting of the American Medical Editors' Association will be held at the Marlborough-Blenheim Hotel, Atlantic City, on Monday and Tuesday, June 9th and 10th, and will take the form of a semi-centennial celebration and a Victory Meeting, emphasizing the part which this Association and its members have taken in the world's war.

The enthusiasm manifested upon the part of the President, Ex-Presidents and Officers of this Association is an assurance of its successful outcome.

A most attractive program is now being prepared and every physician, even remotely interested in medical journalism, will find it to his advantage to attend.

Carolina friends of Capt. Paul C. Anderson, of Westbrook Sanitarium, Richmond, Va., formerly of Wilson and Morganton, N. C., learn with pleasure of his safe return from France where he was a valued member of Base Hospital Unit No. 45. Dr. Anderson was also for several months in 1917 and 1918, prior to service abroad, neurologist at the Base Hospital at Camp Greene, Charlotte, N. C., where his valued professional endeavors were much appreciated by his confreres.

Dr. H. B. Malone of Chester, S. C., has been elected chairman of the Chester Board of Health. He takes the place of Dr. S. W. Pryor, deceased.

Dr. C. A. McLaughlin was recently re-elected county physician to Mecklenburg County. Dr. McLaughlin has held this position for many years. He is a physician that is popular among his constituents.

Opposed to Prohibition—At a recent meeting of the Medical Society of the County of New York, a resolution was adopted by a large majority condemning the hasty ratification by the State Legislature of the constitutional amendment establishing prohibition. Their conclusions were that a very large majority of the people who have been accustomed to the use of alcoholic liquors will resort to narcotics for relief. This belief is well founded, judging from experience, and when prohibition becomes universally effective a great deal of harm possibly will have to be contended with in the way of narcotic addicts.

Dr. Oscar J. Houser of Charlotte, N. C., was married to Miss Grace Elizabeth Baskerville in Raleigh on March 4th, 1919. Dr. Houser is a native of Cherryville, N. C., and has practised medicine in Charlotte for the last six years. He is a successful and popular young physician. Dr. Houser graduated from the North Carolina Medical College in 1907, and received his license to practice medicine in this state the same year. He is a bright and energetic physician and we hope for him a successful life.

Dr. J. M. Caldwell of Gastonia, N. C., died on March the 1st. He was 57 years old and was one of the most prominent physicians of that city.

His death was sudden, having attended to his practice an hour or two before his death. Dr. Caldwell was born in York County, S. C., January 24th, 1862. He was educated at the Medical College of South Carolina and after he graduated he practiced medicine in Charleston for a number of years. He subsequently practiced in Columbia, S. C., but for the last several years he has resided in Gastonia. He received his license to practice medicine in North Carolina in 1885 and was a member of his County Medical Society and was also a member of the North Carolina Medical Society having joined the latter in 1916.

Captain Thomas Hundley Sea, M. C., U. S. Army, of Laurel, Mississippi, a graduate of the University of Nashville, Tenn., in 1906, a member of the State Board of Health, on duty at Fort Oglethorpe until his discharge from the service a short time ago, died at his home from pneumonia following influenza, on January 15, aged 36 years.

Dr. Chas. Arthur Robertson of Hopkinsville, Ky., a graduate of the Vanderbilt University of Nashville, Tenn., age twenty-four years, died in France on November 14th of pneumonia. The pneumonia followed wounds received while in action.

In the death of Dr. John A. Bodine recently in New York, the profession loses one of its choice spirits, an able operator, a teacher of marked distinction, and fine type of gentleman. Those who were so fortunate as to witness his skillful herniectomies at the sessions of the Tri-State Medical Association a dozen years past when he was a pioneer in infiltration anaestehsia, will recall his marvelous dexterity, his coolness, his gentle subtle touch, and his whole demeanor which placed him so far above the average capable surgeon of his day. His going was sudden, unexpected, in the full prime and apparent vigor of active professional life —doubtless just as he would have wished it.

Whittier, Swain County, N. C., a thriving mountain village, surrounded by a splendid mountain population, in a section of the state famed for its beauty and growing in favor with the outside world each year, is without a physician and offers an admirable opportunity to the right man. A general parctitioner of capacity and willing to work will find plenty to do, an appreciative people to live among, and a comfortable living from the start. Only doctors willing to work should write about the location to R. J. Roane or S. E. Varner, Whittier, Swain Co., N. C.

Dr. Henry Sloan of Ingold, N. C., died February the 10th. He was sixty-five years old. He stood high as a physician. His main object in his professional life seemed to be devoted to his patients rather than a state or national reputation as a physician.

He was the father of Dr. Henry Lee Sloan who is now stationed at Camp Lee, Petersburg, Va., also Dr. David B. Sloan, Captain of the 30th Division of the U. S. Army Medical Corps. Dr. Sloan was a man of great ability professionally and his death is a great loss to that section of the state.

Dr. B. O. Edwards of Landis, N. C., is in New York doing special work on the lungs. He contemplates on his return limiting his practice to the respiratory tract.

Dr. O. R. Black of West Jefferson, N. C., has located at Landis, N. C., and will be associated with Dr. Edwards.

LETTER FROM DR. CARSTARPHEN.

It is So Full of Interest That We Feel That it Should be Published.

Office of the Post Surgeon, A. P. O. 712
Is-sur-Tille, France.,
February 15, 1919.

Dr. Edward Register,
Charlotte, N. C.

Dear Doctor:—Your letter reached me yesterday. If you could be suddenly transported "over here" and drop in my office you would smile at the request you have made—to write you an article on the Medical Men in the Army.

I have an area thirty by twenty-five kilometres, in which are many French towns, and incidentally, some twenty thousand American soldiers to be cared for. As Area Sanitary Inspector, I am responsible for housing, public buildings and grounds, sewage disposal, water, food, clothing, quarantine, garbage, incinerators, salvage, food economics, a soap factory, venereal problems, etc., etc. Besides this, I have six thousand men to visit me daily, just casually passing through, who have to be deloused, given a bath, a bunk to sleep in, clean clothes, and food, and sent on their way rejoicing, either to a port of embarkation or to a rest area.

With a force of ninety men and six officers, you see just now, my time is so limited that writing an article is impossible.

So far as I am concerned the armistice has had no effect—except to increase my work. Some day, perhaps, in the quiet seclusion of my "den," in a good old North Carolina town, I may feel in the mood to reminisce, and tell you what I think about it all. Until then, dear Doctor, I shall be in the thick of a big sanitary battle each day. The smoke of such a battle hangs too low for me to see clear-

ly enough to give you an opinion of value.

I am promised a leave to take a post-graduate course in Internal Medicine at King's College Hospital in London, before I return home. When I do get back, I shall locate in Raleigh as an Internist. I could tell you many interesting experiences, but they will keep.

Wishing you the best of everything, I am,

Sincerely yours,
W. T. CARSTARPHEN.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, 66TH ANNUAL MEETING AT PINEHURST, APRIL 15, 1919.

Letter From Dr. L. B. McBrayer.

Sanatorium, N. C.,
March 6th, 1919.

Dr. E. C. Register,
Charlotte, N. C.

My Dear Dr. Register:—Yours of March the 3rd received and I beg to thank you very much for the same.

In regard to your suggestion I am taking great pleasure in enclosing herewith a resume of the program of the meeting, or meetings I should say, with hotel rates. I think it would be well for you to emphasize the hotel rates because they are very, very cheap. You will notice that a man by taking a friend in a room with him can stay there for three dollars and a quarter a day, including all of his meals, which is at the Holly Inn. Or he can stay at the Carolina for three seventy-five per day and from that on up. A private room with bath, which is the highest charge, is seven dollars and a half per day. The Society has never met anywhere where they could get better accommodations for three dollars and a quarter a day than they can get at Pinehurst.

The program is coming along very nicely and is going to be very interesting. We are urging the chairmen of sections to get all their papers in by March the 15th. Whether they will do it or not, I am unable to say. We really have the program for only one section, which is the section on Obstetrics, furnished by your Dr. Alexander. So if it meets your approval I will wait until we have the program a little nearer completed and send you a copy so that you may write the essayists, and I think I will write them also and ask them to submit their papers in duplicate.

Please keep me advised if there is anything else that you would like to have.

Very sincerely yours,
L. B. McBRAYER,
Acting Secretary-Treasurer.

PROGRAM.

STATE HEALTH OFFICERS' ASSOCIATION.

Monday, April 14, 1919.

President—Dr. J. R. McCracken, Waynesville, N. C.

Vice-President—Dr. E. F. Long, Lexington, N. C.

Secretary-Treasurer—Dr. G. M. Cooper, Raleigh, N. C.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

April 15, 16, 17.

President—Dr. Cyrus Thompson, Jacksonville, N. C.

First Vice-President—Dr. J. W. Halford, Lillington, N. C.

Second Vice-President—Dr. J. W. Davis, Winston-Salem, N. C.

Third Vice-President—Dr. A. McN. Blair, Southern Pines, N. C.

Secretary-Treasurer—Capt. Benj. K. Hays, Oxford, N. C.

STATE HOSPITAL ASSOCIATION.

April 16.

President—Dr. J. F. Hihsmith, Fayetteville, N. C.

Vice-President—Dr. E. B. Glenn, Asheville, N. C.

Vice-President—Dr. L. A. Crowell, Lincolnton, N. C.

Vice-President—Miss C. E. Blount, R. N., Kinston, N. C.

Secretary-Treasurer—Dr. John Q. Myers, Charlotte, N. C.

Tuesday evening will be devoted to an address on the Rehabilitation and Re-education of the Disabled Soldier with moving pictures, by Prof. T. B. Kidner, special advisor to the Federal Board for Vocational Education.

Wednesday, three p. m., horse races, compliments of Mr. Leonard Tufts.

Wednesday evening there will be addresses by doctors who have been with the colors.

Room without bath including board one 7.50

SPECIAL HOTEL RATES.

"Carolina."

Room without bath including board for one ..... $ 4.50

Room with bath including board for one 7.50

Room with bath including board for two 10.50
Two rooms with bath between including board for two 14.00
Two rooms with bath between including board for four 20.00

"Holly Inn."

Room without bath including board for one $3.50
Room with bath including board for one 6.50
Room with bath including board for two 9.50

London Physicians Form a Business Union.—It is understood from dispatches that in view of the impending establishment of the Ministry of Health and its consequent effects on the medical profession a meeting of the majority of the physicians of London was held on February 23rd and adopted favorably the immediate organization of the medical profession on a trade basis. For a circumstance of this kind to get into operation among the organized medical profession of London is something new, certainly when we take into consideration the conservatism that has always existed in the medical profession of that great city.

New Hospital to be built in Chester, S. C.—At a recent meeting of the stockholders of the Chester Sanatorium it was decided to erect, immediately, in front of their present institution one of the most modern and largest hospitals in this section of the south. The Chester Sanatorium was started in 1915 by the following physicians of Chester: Drs. R. E. Abell, A. M. Wylie, W. R. Wallace, S. G. Love, J. S. Caldwell, and S. C. Miller, also H. E. McConnell, deceased. The new hospital is to be constructed of fire-proof material throughout. It will have a handsome brick exterior and the interior will be of the most modern fire-proof material that can be obtained. The X-ray and electrical equipment will be of the very best.

Dr. Abell has just returned from France where he was a surgeon in one of the large base hospitals.

Six Million Deaths from Influenza in India.—The government of India reports that deaths from Influenza in 1918 totaled more than six million people. This in all probability exceeds all former records of an epidemic of any kind that has ever prevailed in that country.

BOOK NOTICES

"Surgical Treatment." A practical treatise on the Therapy of surgical diseases for the use of practitioners and students of surgery by James Peter Warbasse, M. D., formerly atending surgeon to the Methodist Episcopal Hospital, Brooklyn, N. Y., in three large octavo volumes, and separate desk index volume. Volume three contains 861 pages and 864 illsutrations. Philadelphia and London: W. B. Saunders Company, 1919. Per set (three volumes and the index) cloth $30.00 per set.

We have looked over very carefully the third volume of Dr. Warbasse's wonderful work. The volume is entitled Surgical Treatment. I do not think that it would be an extravagant statement to say that this is the most up-to-date and complete system of surgical procedures that is now on the market in the English language. It is a very complete work in every sense.

Dr. Warbasse is a fine teacher, a fine writer and a fine operator. He exhibits all these qualities in these productions of his. In the bringing out of these three volumes, we would feel remiss if we were not to mention the fact that the publishers have certainly done their work well. The illustrations are of the very finest and are very numerous. The volume is a fine one and is a duplicate in style of the two volumes that have just preceded it.

The index to these three volumes is gotten out separately. It makes a neat volume within itself. The reviewer has never seen a more perfectly indexed set of books than this work of Dr. Warbasse's.

The Eagle's Eye. A true story of the Imperial German Government's spies and intrigues in America from facts furnished by William J. Flynn, recently retired Chief of the U. S. Secret Service. Novelized by Courtesy of Ryley Cooper. Illustrated. Price $1.50, Prospect Press, 186-192 West Fourth Street, New York City.

Based on actual facts and occurrences presented by the Chief of the U. S. Secret Service "The Eagle's Eye" relates in detail the startling and dastardly plots attempted against the U. S. Government and people by the agents of the Imperial German Government. All of the cunning, carefully planned activities of the murderous plotters are presented in the relations of Chief Flynn, who met the emergency

so effectively that not one of the plans became the terrible menace that it was intended against the American lives, American property and American industry. The Eagle's Eye tells in graphic detail the innermost secrets of the plot to destroy the American fleet, how the $50,000,000 Imperial German Government fund was used for the purpose of arson, bombing, intimidation and the like. It reveals the hideous plot to destroy the Ansonia Hotel, New York, where a great naval ball was in progress. It shows the frustration of the nation wide plot to foment labor troubles and bring about a series of strikes and sabotage. How the "Lusitania" crime, resulting in the murder of 1,200 non-combatant men, women and children, was hatched in America. It is the patriotic duty of every American to learn the inside history of the war against autocracy and no better medium can be found than through the pages of "The Eagle's Eye." This book is peculiarly interesting. It is above the average book of this class and for this price. I read it with interest. The high grade of readers will not feel that they are throwing away their time while going over its pages.

"The Blue String" and other sketches by Alma Newton, author of The Love Letters of a Mystic and Memories. Price $1.25. Duffield & Company, New York.

"The Blue String," which begins with the crisis in a young girl's life and ends with an angel's smile—introduces the newest and best work of Alma Newton. Here in this new volume is every day humanness, but with nothing commonplace, stripped of petty details and presented with all its psychic values standing out clearly—a fascinating group of stories and dialogues. Each has a meaning as well as a story.

"Jacquou the Rebel" (Jacquou le Croquant), by Eugene Le Roy, translated by E. Stimson Brooks. E. P. Dutton & Co., 681 Fifth Ave., New York City. Price $1.90.

A story about the rural life of Perigord between 1810 and 1830 which up to the time of the great European War had hardly changed the customs or the atmosphere of its small peasant communities. A study of sturdy personality standing up successfully against injustice, privilege and intrigue, in which the extraordinary kindness of the common people, their simplicity and devoutness reveal the gentle qualities which have made French civilization so valuable to the world. This is unquestionably the most important of Le Roy's novels, and ranks with the best of de Maupassant.

Every one who is reasonably acquainted with Le Roy's novels will appreciate the statement when the reviewed declares that this is the best of his books after he has had the pleasure of reading the book.

"Roentgenotherapy," by Albert Franklin Tyler, B. Sc., M. D., Professor of Clinical Roentgenology J. A. Creighton Medical College, Attending Roentgenologist St. Joseph's Hospital, Bishop Clarkson Memorial Hospital, Ford Hospital, Douglass County Hospital, and Lord Lister Hospital, Omaha, Neb. Member American Roentgen Ray Society, Fellow American Medical Association, etc. Price $2.50. St. Louis, C. V. Mosby & Company.

It has seemed to the author that there is a dearth of reliable texts available to the beginner in roentgenotherapy. To fill that want and to give a text in simple terms so that the novice can readily grasp the principles involved is the purpose of this book. A brief description of apparatus needed for roentgenotherapy has been profusely illustrated in order to familiarize the reader with the mechanical and electrical side of the work. Detailed technic for the treatment of different conditions have been given as well as cases sighed illustrating each disease. The material in this book has been the result of a scrutiny of literature and the author's experience during the past ten years. The illustrations are as thorough and complete as would be appropriate for a book of this kind.

The volume is gotten up in good style and we can see no reason why it would not be very acceptable to the men of the profession who are interested in this line of work.

Cerebro-spinal Meningitis and the War.—The year 1915 seems to have been a record one for this affection in France and England. In the one of war activities in France the number of cases was 1073 and in England the incidence was 2566. In 1916 there was a notable falling off in both countries, which was maintained in France, although in England a high morbidity occurred in 1917. Less than half the English cases occurred in soldiers.—Patholgia.

Miscellaneous.

Chloramines as Nasal Antiseptics.— Dunham and Dakin (British Medical Journal), conducted a series of experiments on normal men to determine the possibilities of the chloramines as disinfectants of the nasal cavity in carrier cases. They suggest the following plan of treatment: The nose should first be cleansed by irrigation with salt or a 0.25 per cent. aqueous chloramine-T solution, or by repeated spraying alternating with blowing of the nose. The same chloramine solution should be used as a gargle at the same time. When the increased nasal secretion has subsided after this cleansing a two per cent. solution of chloramine-T in chlorinated eucalyptol and paraffin oil should be sprayed thoroughly into all portions of the nose with an oil atomizer. At least four oil treatments should be given daily, or one every two hours if the treatment is to be intensive. The oily solution maintains a sufficient concentration of the chloramine for about two hours, but not for longer.

A Triumph of Preventive Medicine.

The war has been almost from beginning to end a veritable triumph for preventive medicine. In the term preventive medicine is included hygiene and especially personal hygiene. By paying the strictest attention to sanitation in its broadest sense and by carrying out in the minutest details the laws of hygiene, wide spread epidemics have been avoided and the health of the fighting forces has been conserved in a remarkable manner.

The prophylactic treatment of wounds comes within the meaning of the term preventive medicine, and therefore not only vaccine treatment, but all other measures used to inhibit the growth of infectious germs may be comprised under the head of preventive medicine. In the prophylactic treatment of wounds, and of those wounds in particular, in which the presence of anerobic bacteria had been detected or was suspected, it was found that oxygenation was the most potent method of inhibition. Kenneth Goodby, one of the best known bacteriologists of England definitely demonstrated that in the prophylactic treatment of wounds, their oxygenation as accomplished by their irrigation with peroxide of hydrogen was the readiest and most effective means of destruction. Anerobic bacteria cannot exist, nor indeed can any bacteria, in an oxygenated atmosphere and consequently the war has taught, as one of its lessons, from the preventive standpoint that oxygenation of wounds should be regarded as a routine treatment. Oxygenation can be most easily and thoroughly done by irrigation with peroxide of hydrogen, and the most reliable form of peroxide of hydrogen is Dioxogen on account of its purity, stability, and oxygen-liberating powers.

In countless homes, factories, offices, etc., Dioxogen is being used for hygienic and first-aid purposes, on the explicit advice of medical men who have learned from their own experiences its efficiency and freedom from all objectionable action whenever and wherever a potent germicide is needed.

Reconstruction After Protracted Illnesses

Following a protracted illness the system is left depleted of strength, and the urgent indication is for an agent that will add richness to the blood-stream and put fresh vitality into the tissues.

For this purpose cod liver oil is of the utmost service combining as it does the qualities that make the ideal reconstructive. But the gastric function has been impaired too, and plain cod liver oil is not well tolerated. Hence a palatable preparation of cod liver oil must be selected, and there is none better than Cord. Ext. Ol. Morrhuae Comp. (Hagee). Containing all of the therapeutic and nutritive essentials of cod liver oil, Cord. Ext. Ol. Morrhuae Comp. (Hagee) is palatable in a high degree and is tolerated by the weakest stomach, a feature that makes it of exceptional value in states of general debility such as those following a protracted illness. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is everything that plain cod liver oil is except disagreeable.

Common Sense Treatment of Muscular Rheumatic Pains.

True it is that civilized people are peculiarly impatient of pain. In fact, they refuse to bear it and the consequence is that they frequently resort to drugs for relief which in the end bring about their undoing. On the other hand to relieve pain is the legitimate object of the conscientious practitioner, and he endeavors to effect this purpose in such a manner that the patient suffers no ultimate bad effects from the administration of the remedy. Now it is well known that opium and its derivatives will bring temporary forgetfulness and rest to the highly strung, irritated nerves, but it is also a

matter of common knowledge that such drugs have their countervailing drawbacks. For example, they will profoundly and injuriously affect the digestion because they lock up the secretions and prevent them from pursuing their normal functions. However, their worst effect is that their use tends to establish and confirm a drug habit, and the last state of that man or woman who becomes an addict is worse than the first. Nevertheless, pain can be allayed by perfectly harmless and legitimate means and it is measures of this kind that the physician is alone justified in employing. Phenalgin is a remedy which, while as actively effective as the opiates, exerts no deleterious effect on any of the bodily functions, nor does it tend in the least to establish a habit. For example, Phenalgin relieves the distressing and sometimes almost unbearable pain of muscular rheumatism with a remarkable degree of promptitude and at the same time does not suppress the secretion, thereby deranging the whole bodily condition. After taking Phenalgin the organism is as responsive as ever to the action of tonics or other medicaments. Moreover, owing to the favorable analgesic action of Phenalgin the body is enabled to allow full sway to its reconstructive forces. Phenalgin brings about wholesale healthy sleep, and acting in a safe and effective manner may be relied upon as an effective aid in the cure of that distressing affection, muscular rheumatism. Especially has Phenalgin been found of value for relieving the aches and pains which cause so much suffering to patients afflicted with influenza, colds and the ills common to cold weather.

Medical Inspection in Schools of Great Britain.—Roberts reviews the development and scope of medical inspection of school children in Great Britain.

Medical inspection of school children is now compulsory, and is nominally in charge of the Board of Education, but the actual work and immediate supervision are conducted by medical officers, inspectors of physical training, school nurses, physicians and dentists. Every child is thoroughly examined and defective children are segregated from the rest and educated apart from the normal children. Special attention is also given to the blind, deaf, crippled and incorrigible children. Eye and ear defects are noted and remedial measures recommended. Specialists are employed on a part time basis for the treatment of eye, ear, nose, throat and skin diseases. Many dentists are employed both for inspection work and for treatment. Special attention is given to the feeding of necessitous children, as well as other children who desire a warm and wholesome midday lunch on the school premises at a minimum cost. Part of the work is the inspection of schools, and recommendations for improving old structures and for designing new ones.

Roberts reports on the condition of the ventilating system, the nature of the desks and benches used by the children. Inquiry is also made into the effectiveness of the lessons on personal hygiene that are taught in the schools.—Bull. Bureau Education, No. 49.

Pneumococcus Antigen.

A polyvalent antigen of partially autolyzed pneumococci, used in the treatment of cases of lobar pneumonia, is being supplied by Eli Lilly & Company. This product, known as Pneumococcus Antigen, is prepared according to the method of Dr. E. C. Rosenow of the Mayo Foundation.

The antigen is not an ordinary vaccine, but a specially prepared antigenic substance, whose use in over two hundred cases warranted Dr. Rosenow in publishing his researches and suggesting that the product be given a more extensive trial.

In order that this antigen may be made available for wider application by physicians who desire to study its effects in private and hospital practice, it has been added to the list of Lilly products and is available in 5 c. c. ampoule vials containing 20 billion partially autolyzed pneumococci to the c. c.

Eli Lilly & Company is listing Pneumococcus Antigen under the biological order number V-903. It is supplied through the drug trade and further information concerning it may be secured through Eli Lilly & Company of Indianapolis.

The Relief of Sciatic Pains and Lumbago.

Despite the dicta of certain philosophical physicians that pain should be endured, and indeed is, after all, but a beneficent reaction of the nervous system against threatening forces, relief from pain will be sought by all. In fact, it is obvious that long continued pain exhausts, while excruciating pain, as that of sciatica, urgently calls for relief from the standpoint of rational therapeutic practice. To draw attention to one fea-

ture of pain alone which demands, at least, its temporary subjection, reference may be made to insomnia. It is patent that sleep is impossible so long as acute pain is present and it is also clearly apparent, that sleeplessness, lasting over a period, will sap the strength of the strongest constitution. The strong prejudice that exists against overcoming pain, is mainly because the result is often, perhaps usually, obtained by the employment of narcotics, which although affording the longed for effect, not only upset the digestion but what is worse by far may and frequently do establish the drug habit. Phenalgin is a remedy for pain which acts with a sure and uniform efficiency, and at the same time does not lock up the secretions, upset the digestive functions, nor bring about a drug habit. In other words, Phenalgin relieves pain without exerting any injurious action on the human mechanism and permits and encourages the physiologic forces of the body to work at normal speed. The use of Phenalgin, therefore, is of the greatest service in the treatment of pain from all sources for the reason that it does not interfere with the vital forces of the body but if depressed from one cause or another gives them an opportunity to recuperate and regain their normal tone.

Alcohol and Civilization.—Alcoholism and civilization have always sustained a curious relationship. Close students of the history of human society point out many facts which ought to suggest a great deal to the unprejudiced mind (though we greatly fear that the unprejudiced mind is a very abstract postulate). Thus, for example, civilization has seemed to progress only as the free imbibition of alcohol has been possible. The Book of Genesis describes mankind as engulphed in wickedness before the discovery of alcohol. When Noah "began to be an husbandman and planted a vineyard" civilization improved at once.

Civilization first arose in the northern hemisphere, and students point out the apparent association of alcoholism with the phenomenon, for in the southern hemisphere civilization lagged and the use of alcohol was unknown.

The Latin races were certainly drunken in classical times, while their intellectual and artistic productivity was simply marvellous. Today they are comparatively temeprate and surely less creative. The same thing holds good in the case of the Greeks.

In the great days of the Hebrew race wine-drinking was much indulged in. Then was produced that literature under whose spell the world has since lived enraptured.

When the Moslems drank wine the Arabian Nights were conceived and mathematics carried to an excelling point. After the fifteenth century they drank coffee and found it necessary to employ the liquor-using Copts to keep their accounts!

The rise of the Dutch Republic was coincident with the excessive use of gin. Then religious and political freedom was won, the arts flourished wonderfully, and enterprise assumed tremendous force.

The abstemious people of Gaul were unable to resist the alcoholized Romans. Gaul was "bone dry" and uncivilized. But in the tenth century civilization in the Rhine country rapidly rose coincidently with the adoption of alcohol.

The brilliantly intellectual Elizabethan era in England coincited with a veritable epidemic of alcoholism. The vast achievements of Merrie England proceeded hand in hand with a colossal degree of drunkenness.

When the Scotch adopted the use of whiskey in the eighteenth century there followed the rise of the Caledonian peasantry. In the arts and all forms of enterprise there was a great step forward.

The great chapters in American history—the winning of independence and the abolition of slavery—were written at a time of universal alcoholism.

What is the explanation of the foregoing curious and undeniable facts? Progress in the past depended upon alcohol because it destroys the weak. To those uninjured by alcohol successful achievement was easily possible. This does not mean that he who abstained had the world at his mercy. It means that a minority in times past actually derived peculiar effects from alcohol of a character facilitating intellectual processes and making for constructive achievement, while to the vast majority it was a devastating scourge.

Past progress has depended upon alcohol because it has destroyed a class of people who deserved destruction. To such people it has been freely accessible, and civilization has had in it a powerful and selective weapon. Moreover, past progress has depended upon alcohol for the reason that special and desirable reactions have been induced by it in a few individuals. As examples we may name Horace, Anacreon, Catullus, Ovid, Æs-

chylus, Chaucer, Shakespeare, Marlowe, Ben Jonson, Cervantes, Swift, Addison, Steele, Herrick, Omar Khayyam, Burns, Lamb, Byron, Moore, Rosetti, Coleridge, De Quincey, Lionel Johnson, Goethe, Handel, Frans Hals, Turner, Swinburne and Whitman, Hazlitt declined in intellectual power and in health when he abjured alcohol.

Thus there is no record in history of a people exalted by abstinence. The races that have triumphed have been the races that have consumed alcohol freely. Alcohol has discovered alike those who have been unable to resist it and those whom it has made demigods. Upon such foundations racial improvement has been bound to go forward continuously.

But civilization today must find other weapons against the factors that make for decadence. We cannot feed alcohol intensively to those who are harmed by it, with the idea of hastening their destruction, but we can at least use it as an index of superiority and inferiority. It is our business to discover those who experience desirable reactions and to see that they use alcohol. Civilization should make conscious use of this mighty factor in human life, and no longer let the alcohol question remain a political and economic shuttlecock.

Haphazardly the alcohol test has operated through the ages. Let us now bring it into the social laboratory for purposes of differential diagnosis and clinical use in a new sense. Let us insist that subjects like Mr. Bryan be observed under the influence of alcohol. It is entirely possible that through it more than the mere redemption of such individuals be achieved—alcohol might make even of such a man as Mr. Bryan a poet, or a painter, or a President!—The New York Medical Times.

Splenic Extract After Splenectomy.—Shirlaw, in The London Practitioner, reports a case of splenectomy in a woman aged 45, who though she left the operating room in a desperate condition, was apparently convalescent in ten days. Then she began to go downhill, and by the 18th day, her condition was again critical, with weakness, emaciation, thirst, drowsiness, etc.

The administration of extract of sheep's spleen and raw bone-marrow daily restored her gradually to convalescence, and ultimately to complete recovery.

He reports another case of carcinoma of the duodenum in an old lady of 70, which has been solely treated with 5-grain capsules of splenic extract with a successful result. The writer cannot prove absolutely that it was carcinoma, but it was easily palpable, and he was confident enough about the diagnosis. She steadily improved under the splenic extract, has put on flesh, and last summer walked a distance of five iles to a daughter's home and back. The only drug she took was morphin in the form of pills, at the beginning of the trouble. All other medicine made her sick.

Dementia Praecox.—Dementia praecox (Dementia Praecox Studies), is known in several forms, classified as catatonic, semi-catatonic, hebephrenic and paranoiac. Diagnosis is always difficult; for example, the differentiation between neurasthenia and dementia praecox of the hebephrenic type rests chiefly upon the presence or absence of illusions and hallucinations in the patient. Differentiation between hysteria and dementia praecox is based upon the vacillating and fluctuating mental characteristics of the hysterical patient. Epileptic insanity closely resembles the catatonic type of dementia praecox, with this difference, however, in epilepsy the patient acts blindly, while the catatonic possess a small measure of reason. In amentia, which is generally preceded by an infectious disease of some sort, the mental disturbances are more pronounced than in catatonic patients, especially so of the sensory disturbances. Great care must be exercised in the differentiation of the catatonic dementia praecox from maniac depressive insanity; in the former, pleading and weeping are steady and prolonged in spite of the emotions, while the latter is characterized by passion, excitement, abruptness and impulsiveness, all influenced by the surroundings. Paralytic cases may be diagnosed by the fixed pupils. Paranoid dementia praecox develops the most rapidly and culminates the earliest of any of the forms classified.

It is demonstrated that the organism isolated from the nerve centers of cases of poliomyelitis (including the "streptococcus" described by various observers) is a plemorphic bacillus of the distemper group, which varies in characteristics much as the various, supposedly different, members of the group do from one another.

It seems very probable that, while contact cases of poliomyelitis may occurs, either by direct transmission of the germ from animal to man, or from man to man, the great mass of cases which comprise

epidemics are caused by milk borne contagion.

Doctor Rosenow now states that he finds that his "streptococcus" will produce the bacillus form, and Doctor Bristol working with one of Flexner's cultures, obtained from the Rockefeller Institute, developed from the "globoid bodies" bacilli such as the writer described. Bristol concludes From these studies he ventures to suggest the possibility that the organism of poliomyelitis is a pleomorphic bacillus (often indistinguishable however, from a true coccus), and that it may be closely related to the large group or so-called bipolar bacilli, or pasteurella.

Based on this assumption, the mode of spread may be considered analogous to that demonstrated for all forms of pasteurellosis in animals, namely: directly, by contact with the secretions or excretions of an infected individual (either disease or healthy "carrier"); indirectly, by the carriage of the specific organisms by insects, or possibly in dust, uncooked food, or drink.

Early Diagnosis of Renal Tuberculosis.—Blakistone (Virginia Medical Semi-Monthly), has been impressed with the unreliability of the symptoms of renal tuberculosis. They serve only to call attention to an infection of the urinary tract, and should not be depended on as a basis for diagnosis. An early diagnosis is rather easily made, however, by recognition of the tubercle bacillus in smears made from centrifuged urine. Almost any centrifuge will throw down enough organisms to be easily recognized in specimens stained by the ordinary Gabbett method. The smegma bacillus, probably not present in the bladder urine except by contamination and extremely unlikely to occur in urine obtained by ureteral catheterization, can hardly be a source of error upon repeated examinations and in view of the clinical findings. Where there is the least doubt after cystoscopic examination and ureteral catheterization, guineapig inoculation should be done by the rapid method of J. J. Morton. The animal is first exposed to the X-rays for several minutes to lower its resistance to the tubercle bacillus; inoculation with suspected urine is then often followed by tuberculosis in seven to nine days. An X-ray plate taken with collargol in situ is useless in early cases, no recognizable change in the renal pelvis existing. Even the smallest focus of renal tuberculous infection may cause bladder irritation and load the urine with bacilli.

A Case of Puerperal Septicaemia Successfully Treated with Intravenous Injections of Collosol Argentum.—Sanderson and Wells, in The London Lancet, mentions the case of a patient, aged 20, was delivered of a live child by forceps one week previous; the child weighed 8¾ pounds at birth. The delivery was quite easy. There was a moderate-sized perineal tear which was repaired. The perineum became septic and the stitches were removed. When admitted to a hospital a week later her temperature was 104 deg. F., pulse 128, respiration 30. There was a thin sanious discharge from the vagina, a small ulcer over the perineum, and slight abdominal tenderness. She was given a purgative and the bowel washed out. She was placed in the Fowler position for seven hours daily and given hot vaginal douches of lysol; also a mixture containing hexamine, acid sodium phosphate and bromide, and a dose of polyvalent serum, which was continued every day until a vaccine had been made. The next morning her temperature was normal, but in the evening it rose to 105 deg. and she had a rigor.

On the following day she was given an anaesthetic. The perineum and vagina were well swabbed out with iodine, the uterus curetted with a flushing curette and packed with gauze soaked in collosol argentum. Blood taken from the median cephalic vein grew a pure culture of the streptococcus, from which a vaccine was made.

The patient was losing ground, so she was given 20 ccm. of collosol argentum into a vein. This was followed by a profound rigor and a certain amount of collapse, but the next day her general condition was much improved, the temperature had fallen to normal and the pulse in the morning was counted at 80. The temperature rose, however, again at night, but continued at a lower range. The dose of collosol argentum, 20 ccm., was repeated four times at intervals of a couple of days, and was followed on each occasion by a profound rigor. She developed a thrombosis in the external saphenous in the middle of the right calf, and her pulse returned to between 120 and 130.

Her condition again became serious and a blood culture gave a growth of pure streptococcus. A further injection of 20 ccm. of collosol argentum was given, followed, as before, by a severe rigor; the temperature fell and the next day remained at normal.

The Treatment of Wounds by Flavine.—Pitcher and Hull, in The British Medical Journal, gives a comparison between flavine and the Carrel-Dakin treatment in which the former is given second place, and in which it is stated that flavine delays the process of repair allows organisms to remain on the wound surface, and prevents epithelial ingrowth. As the authors have used flavine largely in military practice and are confirmed in their good opinion of it as time passes, it seems to them something of an act of ingratitude to allow an excellent wound dressing to fall into discredit for want of support from its friends.

The difficulty of technique and the high ideal of repair are characteristic of the Carrel-Dakin method, and explain why, though it is one of the most brilliantly successful ways of treating infected wounds in war, it is also one of the most difficult to carry out to full success. It is only in certain hands that it is successful, and when it fails, it fails badly.

They state that in more than 5,000 cases treated with flavine they have found that for ease of preparation and application, rapidity when dealing with large numbers of cases, early cleaning of the wounds, and abatement of constitutional reaction to absorption, flavine and its congener, brilliant green, is an admirable application under all circumstances, but especially where surgeons are few, time is short, and wounds are many.

In the series of 50 cases reported it was noted that temperature falls early; that more than one-third reach the suture ideal, and that, though there is delay in the process of healing, there is some diminution in the local and general reaction to infection.

The Carrel-Dakin method is not of universal application because of its inherent difficulties of technique. Any simpler method which can be used by less skilled workers and which approaches the suture standard of the Carrel-Dakin method is worthy of an extended trial in the army. In the 5,000 or more wounds under observation no skin irritation has been observed, and in few cases was surface destruction of wounds seen treated with flavine. In these few cases a fibrinous pellicle formed which has been attributed to too strong solution and which can be readily removed with saline solution.

From their cases the authors are unable to see that healing is delayed, that organisms linger in the wound, or that epithelial ingrowth is prevented by flavine, but instead they find their patients with normal temperatures, with no signs of constitutional reactions, with healthy granulating wounds over which epithelium is growing naturally.

Wounds of the Ampulla of the Carotid.—Lefevre (Presse Medicale) notes that triple ligation of the common carotid and both its branches for extensive injury of the carotid amplla is attended with the same degree of risk as regards the brain as ligation of the common carotid alone, the condition may be spontaneously improved by reflux of blood through the external carotid into the internal carotid. Theoretically, anastomosis of the internal and external carotids seemed to Lefevre advisable, as in injury of the carotid ampulla necessitating the triple ligature or in ligation of the internal carotid alone, the risk as regards the brain would thus be reduced to that attending simple ligation of the common carotid. This procedure was actually carried out in a case of stellate wound of the ampulla, suture being impossible. The two carotids were joined in end to end suture by one layer of silk thread sterilized in vaseline. Ischemic paralytic manifestations were noted on the day after the operation, possibly because of kinking at the point of suture or a dressing too light around the neck. These were transitory, however, and when the patient left the hospital six weeks later, there remained only some diminution of power on the opposite side of the body.

Tetanus in Home Hospitals.—Bruce, in The London Lancet, presents an analysis of his third series of 200 cases to show the influence of treatment. In the first series the mortality was about fifty-seven per cent., in the second about forty-nine per cent., and in the present series only 36.5 per cent. The recommendations for treatment are as follows: Put the patient in a darkened room with a sympathetic and competent nurse. Provide rest, sleep, and food as the first essentials of treatment. Thorough surgical treatment should be carried out from the inception of the wound, and would enormously reduce or totally eradicate tetanus if always done early enough. Foreign bodies and necrotic tissues should always be removed at once, but if tetanus has developed from neglect, then the wound should not be interfered with until the tetanic symptoms have been controlled. In developed cases at the appearance of the first evidence of tetanus large intrathecal doses of a concentrated antitoxin should be begun and

supplemented by intramuscular and subcutaneous injections. Sedatives should be used in addition, if necessary. Morphine in 0.25 grain doses every four hours is probably the best, but chloral, chloretone, and others may be used. Every wounded man should receive a prophylactic dose of anti-toxin at once, repeating it one or more times.

Leprosy in Brazil.—Figueria de Mello in a monograph recently published on leprosy and its prophylaxis states that the number of lepers in the State of Sao Paulo alone is between two and three thousand. Valverde reports the exact number as 2307. The State of Parana is the last to be visited by the scourge; there are now 400 lepers within its limits. In the State of Santa Catharina the disease is not rare. In regard to leper asylums there is a difference of opinion as to whether a maratime or terrestrial location is superior. In the campaign against leprosy notification and isolation must be compulsory.—Brazil-Medico.

The Successful Treatment of Influenza.

The remarkable success that has attended the systematic use of Burnham's Soluble Iodine in the treatment of influenza during the current epidemic, has emphasized again the value of this remedy in the treatment of the acute infectious diseases generally.

The results that have been obtained in influenza have been uniformly satisfactory, and used sufficiently early and in proper dosage, it has served not only to reduce the severity of countless cases, but also to limit their duration. The development of complications has been lessened to a marked degree and recovery without any unpleasant sequelae has rarely failed to follow in a few days.

In fact, in the hands of a great many physicians, Burnham's Soluble Iodine has seemed to possess almost specific properties in this epidemic type of influenza. The custom of many practitioners which has been most uniformly successful, has been to start at once with large doses on the principle that we have a mixed infection to contend with, and that it is of the utmost importance to increase phagocytosis and raise the resistance as quickly as possible.

When temperature is 101 to 104 or higher, not less than 30 drops should be given either internally or hypodermatically every three hours until temperature recedes. When given hypodermatically, it should be injected very deep in the gluteal muscles, 25 per cent. dilution in sterile water, or full strength if necessary. The temperature usually subsides after the second or third dose, then the dose can be diminished to 15 or 20 minims by the mouth every three or four hours. Many virulent cases complicated with pneumonia have been saved by this treatment.

Free Iodine will not break down healthy tissue whether given by the mouth or injected. Burnham's Soluble Iodine combats the anti-ferments, stimulates cell and glandular activity and oxidizes toxins.

Write for further information, if desired, to Burnham Soluble Iodine Co., Auburndale, Mass.

Saccharomycosis.—Ribeyro in the Anales de la Faculdad de Medicina, after deploring the lack of interest in Peru in myotic affections—which seems strange in view of their prevalence in South America and of the amount of attention which they are receiving in tropical medicine—proceeds to relate a case of a rare form of mycosis until this possibility is disproved. The patient was a young woman of 22, eight years resident of Lima, never ill, and free from syphilitic taint, the Wassermann being negative. On December 4 she fell and hurt her lower lip. Iodine tincture was at once applied over the region and provoked a cheilitis for which a soothing ointment was applied. The condition became a permanent one, rebellious to all treatment. From the description the lips were the seat of a condition much like an obstinate eczema, swollen, red, edematous, and weeping.

Fractures of the Shafts of Bones Caused by Bullets.—Delmas (Presse Medicale) points out that the finding of only a punctiform wound of entrance of the bullet is by no means a guarantee that serious damage may not have been produced within the limb and that non-operative treatment is indicated. The wound of exit may be more or less enactive and irregular, with or without hernia of muscle. Radical treatment is necessary whether the fracture be comminuted fracture or not. In one of the author's cases, with a clear line of fracture of the humerus, bits of clothing were found in the tissues in spite of an absolutely punctiform wound of entrance. Where the wounds of entrance and exit are both punctiform but the x-rays show a comminuted fracture, complete operative treatment is likewise indicated, as one

cannot be certain of the asepsis of the tissues, and because the many loose bone fragments, projecting into the muscular masses and always more numerous than the screen shows, play the role of foreign bodies favoring delayed outburts of a latent infection and, mechanically, callus formation are less easy than in a clear linear fracture. Where both orifices are punctiform and the fracture is linear, absention from operation is permissible, with careful watching. Possible infection must always be feared, the narrowness of the orifice by no means implying that bits of clothing have not been forced in. The absence of bone fragments, however, with the ease of reduction and maintenance of position, reduces the dangers of secondary infection, if it later appears to a minimum.

The Treatment of Extensive Septic Wounds.—Gardiner, in The London Lancet, describes a method of treatment for septic wounds with extensive discharge without a permanent dressing. Incisions and openings are made as usual but with the idea of obtaining the maximum effect of gravity in the subsequent treatment. The wound is then packed with gauze and bandaged in the usual way in order to stop oozing of blood. Forty-eight hours later all dressings are removed. The wound is syringed with a mild antiseptic, and a guard of perforated zinc cut to appropriate size and bent in the form of a cradle, placed over the wound and covered with a sterilized towel. If possible, an ordinary cradle is placed over the whole. The discharge is allowed to run out from the wound and is taken up by a sterile pad of wool or spagnum moss, placed so as not to touch the wound. The wound is then syringed and swabbed at intervals, on an average twice a day. This treatment is continued until all pockets and recesses have been closed by granulation, the granulated surface is smooth, and the discharge has practically ceased. The wound is then dressed in the ordinary way with gauze and wool. The difficulties experienced in this method of treatment have been threefold: (1) The difficulty of arranging the wound by operation for opening pockets and of altering the position of the patient so as to obtain the greatest effect of gravity; this may be partly overcome by the judicious use of gauze wicks and by frequent cleansing of the wound by syringing. (2) The difficulty of continuing the treatment at night, when patient is restless. The limb may be placed in a splint or an ordinary dressing and bandage applied at night. In some cases a rampart of spagnum moss may be built up round the wound and kept in place with a towel or bandage. The advantages of the method indicated are: (1) Perfectly free drainage. (2) Absence of tendency to pocket, provided the wound is exposed and arranged so as to allow gravity its maximum effect. (3) Absolute painlessness of dressing even the most extensive wounds. (4) Dressing can be performed without manipulation of the wounded part. (5) A great economy in dressings is effected. The author points out that the edges of wounds so treated may tend to become hardened and small scabs may develop. These should be removed at once and can usually be prevented from forming altogether by careful cleansing and swabbing of the wound. In case of deep pockets in the wound, a rubber drainage tube should be employed to prevent premature closure.

The Neglected Therapy of Convalescence

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstituent and supportive measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese) in such form as to assure their prompt absorption and appropriation. One especial ad-

vantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

Hemorrhagic Bronchitis: Castellani's Broncho-pulmonary Spirochetosis.—Violle (The London Lancet) found a number of cases of broncho-spirochetosis in France in 1916. At Toulon a comparatively large number of cases occurred among native troops from the Far East, and also in Europeans. The disease was first discovered by Castellani in Ceylon in 1905 and since then has been noted by various observers in the West Indies, the Philippine Islands, India, and other tropical countries. The symptoms observed by the author in France were: Hemoptysis, the case generally having been diagnosed as tuberculosis ,and the expectoration being of a peculiar vivid pink; and frequent cough, worse at night. Physical examination of the chest often revealed little or nothing; in some cases there were signs of bronchitis with or without emphysema, or signs of consolidation. The general condition of the patient was often good, and frequently there was no fever. There may be a slight degree of anemia in such cases but the number of leucocytes is normal, as is also the leucocyte formula. Microscopical examination of sputum reveals enormous numbers of the Spirocheta bronchialis, an organism which varies in length, shape, and number of spirals. The length may be from 4 to 30 microns, and is usually from 7 to 14. According to Fantham, the medium forms are derived from long ones by verse division. Certain of the spirochetes have very few spirals; others have a large number very close together. This spirochete has not yet been cultivated. The author has not been able to reproduce the disease in rabbits, guinea pigs or pigeons, but Chalmers and O'Farrell have done so in a monkey by intratracheal injections. The disease is very contagious, probably by means of "coccoid bodies" derived from the spirochetes. The author believes that this spirochete may be present in small numbers in many individuals, as is the case with the pneumococcus, and that with lowered vitality of the tissues they may multiply and invade the whole of the bronchopulmonary system. In regard to the possibility of infection spreading from the mouth to the bronchi, none of the author's patients had any mouth lesions of spirochetal origin and their teeth and gums were in good condition. Daignosis is based on finding the S. bronchialis in the expectoration in the absence of the tubercle bacillus, of hyphomycetes and of ova of Paragonimus westermanii, Kerbert. Clinically, if a patient exhibits bloody expectoration of a vivid pink color and is in good health, broncho-spirochetosis should be suspected. Cases of mixed infection occasionally occur. Prognosis, as a rule, is favorable. Symptoms may disappear in three to four weeks. Relapses seem to be frequent, and chronic forms occur with mucopurulent, greenish, or bloody expectoration. In many cases, rest, nourishing diet, and country air effect a cure. Ergotine and tr. iod., a few drops well diluted, should be given if hemoptysis is severe; and if there is much secretion and cough is painful, opium preparations may be given. Arsenic and tartar emetic and arsenobenzol have been used in treatment and may be indicated in chronic cases. The possibility of this disease should be remembered in cases of hemoptysis. Correct diagnosis is important, not only to relieve the patient's mind of the fear of tuberculosis, but also from a medicolegal standpoint, since tuberculosis entails permanent discharge from the army with pension whereas bronchial spirochetosis merely means a few weeks rest for the patient.

Hemeralopia in Soldiers.—Danis, in the Archives Medicales Belges, says that this subject seems to be a very ancient one and a record of it is found in the thirteenth century in connection with the Crusades, when members of the expeditionary force of Jean de Brienne suffered from night blindness while in Egypt, and at the capitulation of Damietta in 1221. The historians next find the affection mentioned in 1798 and curiously enough again in Egypt in Napoleon's army. It was also seen at about the same period at the siege of Malta. The besieged were the ones who suffered. The next mention appears to be in Russia in 1812, the author supplying no details. The affection was noted in the French expedition to Algiers in 1838 and again in the Crimean war in 1854-5. During the Russo-Japanese war it was studied in Manchuria and before the present world conflict it was studied by a French ophthalmologist in the Algerian colonial troops. In most of the garrisons in Europe, even in times of peace, cases occur and this is more marked in Eastern than in Western Europe. In the non-military population, the same disability has been encountered in unfavorable economic and hygienic surroundings. Thus it has been known to

prevail among the Fellahs of Egypt, the negroes on Brazilian plantations, sailors on long cruises, tunnel workers, and prisoners.

The Modern Treatment of Empyema by Antiseptics.—Stoney, in The British Medical Journal, says that acute empyema is easily cured by simple surgical methods. Through neglect or inefficient surgical treatment the lung and diaphragh become covered by granulation tissue which by its further development into fibrous renders the cavity non-collapsible and chronic empyema results. This condition is difficult or impossible to cure even by extensive Estlander or Schede thoracoplasty.

Most if not all cases can be cured without resorting to such dangerous and mutilating operations, because it is not necessary to obliterate the pleura space but merely to render its walls sterile, and this is possible by frequent washings with hypochlorite solution. The treatment is not dangerous provided a free exit for the fluid is provided.

The earlier the treatment is instituted, the sooner and more surely will a cure be obtained. The opening is most suitably made by removing one inch of the eighth rib in the scapular line. Three illustrative cases are reported.

While a quarter of a century has brought no new remedy for influenza, since synthetics and quinine are not to be depended on, the best results are still obtained from the salicylates which become anti-microbic in the blood. Hence, Tongaline is particularly indicated for influenza, because, in addition to the action of the salicylates, it exerts pronounced alterative and eliminative effects, whereby the poisons in the system are promptly and thoroughly expelled.

Gunshot Injuries of the Elbow-Joint; Treatment by Early Excision—Shepherd, in The British Medical Journal, says that injuries inflicted in the region of the elbow-joint of necessity vary with the nature of the missile, the degree of sepsis, and the amount of damage to bone and soft parts. The ultimate results of injuries to the elbow-joint by gunshot cannot be regarded as satisfactory, as in the majority of cases there is complete ankylosis. Even if the wound remains aseptic, bony out-growth will in the long run inhibit movement to a considerable degree.

When the bones entering into the formation of the elbow-joint are badly comminuted, sepsis spreads in the surrounding parts and the patient shows signs of septic absorption. Whatever method of combating infection is undertaken, the results are the same, affording risk to both life and limb.

Primary excision of the elbow for tuberculous disease, fracture, dislocation, etc., yields good results and it would appear feasible that equally good results might be obtained by early excision of wounded joints. The degree of sepsis in the surrounding tissues forms no contra-indication to immediate excision. The amount of bone to be removed depends upon the nature of the primary injury.

In an early series in which the humerus was removed just above the epicondyle with the whole head of the radius and ulna, movement was long in returning. In a later series the lower end of the humerus was removed above the epicondyles and rounded well off, preserving the radius and ulna intact and not interfering with the attachment of the triceps to the ulna through the angled incision of Kocher.

If the amount of sepsis was great the wound was left open and treated with eusol gauze or the Carrel-Dakin method, the arm splinted at right angles until sepsis subsided. In milder cases the wound was partially closed.

The splint is left off as soon as the wound has healed and motion is encouraged.

The results, even in septic cases, were surprising, the patient being out of bed early and movement encouraged by the end of the fifteenth to the eighteenth day. The author states that the earlier the excision is performed, the more certain is the patient to have a good and serviceable arm with free movement.

"K-Y" Analgesic.

The Relief of Pain is a problem easily solvable by the doctor. But, as many problems are capable of more than one solution, so that of analgesia presents certain difficulties that deserve more than passing consideration.

The use of narcotics or depressants is apt to mask certain important symptoms, interfere with the cardiac, circulatory and metabolic processes and in some instances, expose the patient to the formation of a drug habit. On the other hand, physical therapeutic agents provide a means of securing local analgesia, without any such disadvantages or dangers.

Heat, cold, electricity are useful, and counter-irritation is effective and satisfac-

tory in many instances. Pain is a sensation, a manifestation of irritation or stimulation of certain sensory nerves, usually referred or reflected from the point of origin to some more or less distant area. Counter-irritation applied to such an area acts to relieve, or greatly lessen, the sensation of pain.

The most effective and, at the same time, least irritating of counter-irritant agents comprise such drug agents as camphor, menthol and methyl-salicylate. These are combined in "K-Y" Analgesic in a greaseless, bland base secure effective action without the handicap of over-irritation, blistering, or the staining or soiling of the patient's skin or clothing. The depressing sequelae oftentimes attending the exhibition of narcotics, sedatives or depressants are thereby avoided.

The best results are obtainable if the previous application of "K-Y" Analgesic is washed off before each additional one is applied. This product is put up conveniently in collapsible tubes obtainable at drug stores.

A Preliminary Note on the Treatment of Infected Haemothorax.—Dobson, in The British Medical Journal, says resection of the rib, the evacuation of fluid and clots, the removal of foreign bodies when possible, and immediate closure of the wound is ideal and is being more and more widely adopted at the casualty clearing stations, but is only applicable in the earliest stages of the infection. When symptoms recur, these patients very rapidly become seriously ill. Those cases where infection has passed beyond the contents to the walls of the pleural cavity cannot be treated in this way.

Dobson uses a special silver cannula without a terminal aperture but twelve small lateral holes. The eighth rib is resected, Tuffier's rib spreader inserted, the pleural cavity wiped out, the foreign body removed and other complications dealt with. The cannula is then inserted through the third or fourth interspace about, or external to, the mammary line. The original incision is then closed around a tube long enough to reach into a bottle of antiseptic fluid and the cavity is then irrigated every two hours with Carrel-Dakin solution. The infection is quickly controlled, the lung expands well, and the general condition improves rapidly.

Certainly at present the treatment of badly infected haemothorax does not give good results. Many cases discharge for a long period and only heal after much falling in of the chest wall or after wide resection of the ribs. If the lung does not expand, the author does not hesitate to reopen the wound, free the adherent lung and close the chest.

Putting Vim in Chlorotic Girls.

In the case of the pasty-faced, apathetic girl or young woman, who is forever on the verge of a serious illness, for no other reason than lack of vitality and ordinary tissue resistance, cod liver oil, is the one therapeutic agent that should be chosen. But these patients cannot tolerate the plain oil by reason of its unpalatableness, and a pleasant preparation such as Cord. Ext. Ol. Morrhuae Comp. (Hagee) should be chosen.

Cord. Ext. Ol. Morrhuae Comp. (Hagee) contains every therapeutic and nutritional virtue of the plain oil, and as it is palatable and may be continued for long periods, it is the ideal agent for young women of the chlorotic type. It makes the blood-stream richer, adds to the powers of resistance and lifts them out of the near-invalid class. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is everything that plain cod liver oil is except disagreeable.

It was to be expected that almost coincidental with the onset of the influenza epidemic on this side of the water, an effort would be made to lessen the incidence of the disease, or at least to reduce the severity of the attacks and frequency of complications by vaccination.

Because of the largely undetermined etiology of the present pandemic of influenza, the underlying principle of all immunizinz attempts has been to raise the resistance of persons to the micro-organisms commonly associated with the disease. Most frequently these organisms are the influenza bacillus, pneumococcus, streptococcus, staphylococcus and allied organisms.

A study of the numerous mixed or combined vaccines used, shows individual variations in the details or preparation, final bacterial count, and in the dosage and intervals between doses. Therapeutic results reported to date do not seem to have been modified to any material extent by such discrepancies. Good results have been claimed for all vaccines.

Among the new mixed respiratory vaccines of this kind, is one devised by Dr. Rosenow of the Mayo Foundation.

Attention is called to the fact that this vaccine was intended primarily by Dr. Rosenow for the prevention of influenza

and attendant pneumonias. In origin, it is synchronous with the epidemic and in principle analagous to other ordinary saline influenza mixed vaccines and should not be confused with the antigen of partially autolyzed pneumococci which Dr. Rosenow recommended for the treatment of pneumonia. The development of the antigen occupied several years of patient and systematic study by Dr. Rosenow on the mechanism of pneumococcus infections and their treatment. The announcement of his laboratory and clinical experience with Pneumococcus Antigen antedates the onset of the influenza by several months.

Pneumococcus Antigen is manufactured by Eli Lilly & Company and the reports received by this company on the extensive use of the antigen during the past few weeks, justify in no small degree the hopes Dr. Rosenow had for it as a valuable specific aid in the treatment of pneumonia. It seems worthy of further trial.

The Harrison Act.

As amended by the new war revenue act, will be mailed postpaid to any druggist, physician, dentist or veterinarian who will send a postal request therefor to "Mailing Department, Parke, Davis & Co., Detroit, Mich." Please observe directions strictly.

Surgery of the Chest as Carried Out at the Front.—William Taylor, in The Dublin Journal of Medical Science, says that no branch of surgery has been more greatly revolutionized during the war than the methods of dealing with injuries of the chest. This change has been the outcome of the work of Duval and many other surgeons, British, French and American. It was estimated that the mortality due to chest wounds at the aid posts was from 25 to 30 per cent. The seriously wounded die either on the field or at the aid post. Hemorrhage and mechanical asphyxia, open thorax with traumatic dyspnea are the two chief causes of death. Deaths on the field are mainly due to hemorrhage from the large vessels. Cases of that type do not appear in any statistics. The mortality of chest wounds at the casualty clearing stations averaged from 18 to 20 per cent. In stationary or base hospitals the mortality was about 10 to 12 per cent. The mortality is thus proportionately lower the further one proceeds from the fighting line. The cases which reached the base hospitals were those in very good condition who had survived the complications of the first few days. The mortality of these cases at the three different places at which they might be treated averaged from 18 to 20 per cent. That did not include the mortality arising from chronic sequelae, such as long-standing empyema, abscess of the lung and late complications generally. Such a mortality was unsuspected before the war.

According to the writer the explanation is simply that experience before the war was based upon the practice of bullet wounds, whereas in this war shell wounds have preponderated. In Duval's experience, the proportion of shell wounds to bullet wounds was as 3 to 1, whereas the mortality of shell wounds to bullet wounds was 14 to 1. A bullet wound is either fatal at once, from hemorrhage due to injury of a large vessel, or it is comparatively benign. A bullet wound is either aseptic or seldom followed by grave infection, and to this is due its lower mortality. It is the danger or sepsis in connection with shell wounds that renders them so serious.

A shell wound in which a foreign body is retained in the lung is attended by a much higher death rate than a through and through shell wound. Duval was the first to state positively that immediate operation could save some of the cases of severe pulmonary hemorrhage. Hartmann, who was at first strongly opposed to operation for the arrest of pulmonary hemorrhage, became strongly in favor of it. Tuffier followed suit. All cases of severe chest wounds are in a condition of grave shock, and one must judge quickly whether the dangerous condition is due solely to shock or to hemorrhage. If there is an open thorax, or if the blood is flowing freely from a small entrance or exit wound, there is no difficulty in determining the question. It is in cases of intrapleural hemorrhage that one is in doubt as to how to act. Blood pressure alone is of use in determining the question. If, in spite of warmth, the blood pressure progressively falls, operation is indicated, as hemorrhage is outweighing shock. It has been shown that thoracotomy has practically no effect on arterial pressure. The operation can be performed with a very low blood pressure, when a laparotomy could certainly not be tolerated. In short, the patient's general condition never offers a contraindication to thoracotomy. It is believed that two-thirds of the cases of chest wounds with hemorrhage can be saved by early operation and direct arrest of bleeding from

the lung. Infection of the hemothorax in bullet wounds is exceptional. Colonel Elliott, F. R. S., has demonstrated that the infection of the hemothorax originates in the clots of fibrin and blood which form on the surface of the wound, and collect in the pleural cavity.

The treatment of penetrating wounds of the lung will depend upon whether the wound of the lung is entirely superficial, whether the foreign body is retained, or whether the case is one of the through and through types. (1) For a superficial wound of the lung, excision may be practised, and the wound sutured, so as to arrest hemorrhage. (2) In penetrating wounds with retained foreign body, the foreign body should be extracted through its entrance tract. Fragments of clothing should be removed. The tract should be then cleansed, and the opening into the lung sutured, so as to guard against subsequent infection of the pleura from the lung. (3) In penetrating through and through wounds, suture of the entrance and exit wounds must be performed, but Duval has never carried out the ideal procedure of cleansing out the entire tract. Sepsis in the lung occurs early, much earlier than in the pleura, hence early operation is advisable. Bullet wounds may be left alone unless they give rise to dangerous hemorrhage. Minute fragments of shell also may be left alone, as they do not carry in pieces of clothing, and they are often sterile. "Open thorax" is a term coined to describe those cases in which the thoracic wall is widely opened and air passes directly into the pleural cavity with each respiratory movement. For two reasons such a wound must be closed: to lessen the danger of asphyxia, and to protect the pleura against infection from without.

Wounds of the diaphragh must always be sutured. If hemorrhage is taking place it must be dealt with first; otherwise a wound of the diaphragm should always be treated first. If the liver is involved the opening is, if necessary, enlarged, so as to give access to that organ. The liver wound is then cleaned with a Volkmann's spoon, followed by swabbing, and sutured. It is strongly emphasized that a foreign body should never be left in the liver. The opening in the diaphragm is then closed, with one or more mattress sutures, and the chest is subsequently treated. Duval delivers the lung on to the chest wall, almost in the same way as the small intestine from the abdomen. He has proved that the rules of general surgical technique are perfectly applicable to the lung. Drainage of the pleura need never be considered. It is not required, and is not practised. When the thorax is opened, the lung should be dealt with first, and the toilet of the pleura performed subsequently.

Taylor states that there are three methods to arrest hemorrhage from the lung. (1) Plugging, which is only a makeshift, but which under certain conditions must be resorted to. (2) Suture of the lung. (3) Ligature of the bleeding vessel, which is ideal. Practice has shown that one can count upon the resistance of the lung tissue itself to arrest hemorrhage in a tract, both ends of which have been closed.

With regard to the extraction of foreign bodies, it is generally stated that it is best not to make a new incision, but to make every effort to extract the foreign body through the opening by which it entered. The tract is subsequently cleaned out with a gauze wick held in a long forceps. Suturing should be accurately performed, and the pleura carefully adjusted. The pleural cavity must be emptied of blood and clot, and the whole extent of the pleural cavity wiped dry. The opening in the chest wall is then closed by careful suturing in layers. The air may or may not subsequently be withdrawn. Distress in breathing is often completely relieved by its withdrawal. If a septic effusion develops later it can be drained.

The Treatment of Foreign Bodies in the Lower Air Passages and the Oesophagus, or the Direct Method.—Tilley, in The London Lancet, says that the general term "endoscopy" includes those methods by which a direct inspection may be made of the lower air passages, the oesophagus, and stomach.

The mode of access of foreign bodies to air passages is by inhalation, during ill-timed inspiratory effort, or during anaesthesia or unconsciousness from other cause. Impaired muscular activity or sensation from tertiary syphilis, malignant disease or tuberculous ulceration may be contributing causes. Foreign bodies in the oesophagus are lodged there during swallowing.

There may be no history of the accident. Cough and dyspnoea when present indicate a foreign body in air passages. Difficulty in swallowing points to the oesophagus. A foreign body may be present in the absence of symptoms. A pin impacted in the larynx thirteen years caused only occasional fits of coughing. The only symptom may be a foul breath.

A large foreign body in the oesophagus may mislead the surgeon to perform tracheotomy because of dyspnoea and stridor due to pressure on the trachea.

The early symptoms, however, are as a rule sufficiently characteristic and localizing. In general the symptoms are: (1) obstructive, from the size of the foreign body or from spasm; (2) irritative, produced by the presence of the foreign body; or (3) inflammatory.

Foreign bodies lodged in tonsils or pillars of the fauces produce pain of a pricking nature felt most on swallowing. In the pharynx a large bolus of food may lodge and cause difficulty in swallowing and in breathing. Smaller and sharper foreign bodies may cause dysphagia and inflammation. In the larynx intense croupy cough, dyspnoea and aphonia are the common and immediate symptoms. A large object may produce sudden death by obstruction and by spasm. Small sharp objects lodging in the aryepiglottic folds may cause pain, inflammation or abscess formation.

A small foreign body in the trachea may produce no symptoms, unless it is in the sensitive subglottic region when violent coughing and laryngeal spasm are characteristic. In the bronchus, if there is no obstruction there may be no symptoms until irritation or inflammation is set up. Complete obstruction of the bronchus will involve retention of secretion followed by bronchiectasis, septic pneumonia, abscess or gangrene. Haemoptysis and pyrexia occur late and are uncommon. Unilateral bronchiectasis in a child should always excite suspicion of a foreign body in a bronchus.

In the oesophagus the vast majority of foreign bodies lodge in its upper third opposite the upper thoracic aperture. A small foreign body may cause obstruction through spasm or through damming back of food. Dyspnoea, cough, and finally a fistula between trachea and oesophagus may result.

In a suspected case, besides the history a local and general examination of the neck and chest, radioscopy and endoscopy must be made. X-ray is of great importance and may help in localization by showing secondary lesions even when the foreign body does not obstruct the X-rays. On the other hand, a metallic body may not show in a stout person.

A general anaesthetic may be used and is indicated where a foreign body is tightly impacted. Local anaesthesia relieves discomfort and minimizes reflex activity. No anaesthetic is used in small children. The patient should lie on his back with shoulders slightly raised and head thrown well back.

An instrument having distal illumination is the best. Strict asepsis, a plentiful supply of swabs, and some form of suction apparatus for keeping the field free of mucus and blood are important in technique.

As a rule urgent dyspnoea demands immediate tracheotomy. The bronchoscope can then be passed through this opening. If dyspnoea persists after removal of the foreign body, intubation or in extreme cases tracheotomy may be necessary. Oesophagoscopy is as a rule not so urgent as bronchoscopy but is definitely indicated in all cases of lodged foreign bodies except in cases of traumatism or inflammation of the oesophagus, in some cases of aneurism or serious vascular lesion, and in cases in too critical a condition to withstand the procedure. The mortality in skilled hands is very low, but the "occasional operator" will be a source of danger to the community.

Notes on Penetrating Wounds of the Brain.—Cushing (British Medical Journal), in taking up his duties in a hospital to which he was attached endeavored to make an estimate of:

1. The operation mortality.
2. The proportion to one another of simple scalp wounds, cranial injuries without dural penetrations, and craniocerebral wounds respectively among all the cases forwarded from the field ambulances on the front concerned, with an initial diagnosis of "head or scalp wound."

During the first two weeks of the three months' period 49.3 per cent. of the scalp wounds had dural penetration, of which one-third died without operation, the remaining two-thirds all being submitted to operation, and exactly half of the patients dying, giving a 50 per cent. operation mortality for wounds of this type.

During the whole three months' period there came under the supervision of the author's team a series, 10.9 per cent. of which proved to have merely scalp wounds, 23.7 per cent. cranial wounds with intact dura, 60.7 per cent. cranial wounds with dural penetration, and 4.5 per cent. bursting fractures but with the dura and scalp both intact.

It was the penetrating wounds with which the author was chiefly concerned and a serious effort was made to see whether the accepted mortality of 50 per cent. could not be lowered by improvement in technique and more intimate su-

pervision of the individual case. Careful records have been kept of 225 cases, of which 6 died without operation; of the remaining 219, 133 proved to have dural penetration. These are divided into thirds corresponding to the consecutive months of the service: first 44 cases with 24 deaths, 54.5 per cent; second 44 cases with 18 deaths, 40.9 per cent; third 45 cases with 13 deaths, 28.8 per cent.

These percentages are practically end-results and seem to justify 75 per cent. of recoveries in an advanced hospital. During the three months' period an operation with certain technical devices applicable to the average penetrating wound was gradually evolved, to which the lowered morality percentage in the series can be ascribed. Aside from the principle of track suction, there is nothing new about the procedure.

The main features of the operation lie in:

1. The removal en bloc rather than piecemeal of the area of cranial penetration.
2. The detection of the indriven bony fragments by catheter palpation of the track rather than by the exploring finger.
3. The suction method of the removal of the disorganized brain.
4. The use of dichloramine-T in oils as an antiseptic.

The routime pre-operative neurological study of the case, stereoscopic X-ray negatives, the shaving of the entire scalp, the invariable use of a local anesthetic, preferential radial (tripod) rather than flap incision, foreign body extraction with the magnet, closure of the wounds with buried sutures in the galea, the dressing of all serious cases in the operating room, all these steps were contributory to the successful outcome of the more severe cases.

At the casualty clearing station team work is of prime consideration to eliminate all delay. Each team should have an extra table to support the stretchers and cases can be constantly fed in and the various examinations and pre-operative preparations carried on under the surgeon's eye with little loss of time between operations.

Serious cranial operations should not be undertaken without a preliminary neurological study. Without such an examination, an operator cannot be sure whether the paralyses which are subsequently observed were pre-existent or due to the surgical manipulations. The question of justifiable opening of an intact dura or the need of secondary operation for symptoms of presumptive abscess may depend entirely upon the original neurological symptoms. Stereoscopic radiograms are invaluable.

The entire scalp should be shaved and sponged with alcohol and a bichloride of mercury solution instead of iodine or other staining solutions.

About one hour before operation a sedative is given, usually one-third of a grain of omnopon. Fifteen to twenty minutes before operation the lines of the proposed incisions are infiltrated with 1 per cent. novocaine and adrenalin, 15 drops to 30 ccm. General narcosis increases intracranial tension, increases bleeding from the scalp and encourages rougher method of operating and it leaves many patients in a condition in which inhalation troubles are prone to occur.

For ragged or gutter defects over the vault the author prefers the three-legged or tripod incision. When the three flaps are reflected, ample exposure for trepanation is afforded, and if the flaps are sufficiently undermined, come together without undue tension.

The trepanation en bloc is done by trephining an opening to one side of the depressed area and with rongeurs nibbling away bone until an opening of sufficient size has been secured. A more simple and satisfactory procedure is to encircle the area of depressed bone with a number of small punctures made with a perforator and burr and then to connect these with a linear cut.

In penetrating cases the proper and thorough cleansing of the track is the most important step in the operation.

The author has abandoned cutting away the torn, ragged margins of dural opening, for it does not seem to be the source of infection. Retension of disorganized cerebral tissue which lines the track and in which indriven bone fragments are embedded is more serious.

A flexible, soft rubber catheter has proven satisfactory in determining the direction taken by the missiles and with it the narrowest track can be investigated with almost as great delicacy as by direct palpation. By attaching to the catheter a Carrel-Gentile glass syringe the softened brain may be sucked out, which should be repeated until the cavity is gotten as free as possible of disorganized cerebral tissue. At times pieces of bone come away in the eye of the catheter.

The purposal incision of the dura in the aera of a dirty wound must be done only

in those cases in which the neurological symptoms indicate a serious local loss of function or in which the undamaged dura is tense and evidently overlies a clot or contused area. If under these conditions the disorganized matter is washed away until normal tension is restored and the membrane accurately closed, there is practically no risk of infection.

Regarding the removal of retained missiles, the author considers the middle ground position safest, namely, always to extract a foreign body if it can be accompolished without increasing the damage already done when the missile is deep and always removing superficial ones. Extraction with a magnet is the only justifiable method. After the track has been cleansed, a wire nail is introduced down to the foreign body and the magnet connected to the nail for withdrawal of the foreign body if it is magnetizable.

The use of watery solutions of antiseptics in the brain is disappointing; however, the use of dichloramine-T produced a notable diminution in the number of infections.

The Disappointments of Vaccine Therapy.—Adamson, in The London Lancet, writes an article with this title. He is one who is disappointed. The doctor asks, how are we to account for the comparative failure of curative vaccination as contrasted with the striking success of prophylactic vaccination? Is it not that in prophylactic vaccination we are dealing with a less intricate problem and a proceeding which is better supported by known facts than that which confronts us when we attempt to cure an already existing infection by means of vaccines?

It is easy to see that preventive vaccination has a sound foundation. The study of immunity reactions has established the general principle that when an animal becomes infected by a micro-organism it is rendered, after a period of incubation, speifically supersensitized to the toxins of that micro-organism—to use the expression of Von Pirquet, a condition of allergy or altered reactivity is produced. As a result of this allergic condition the animal is protected against a second infection. An atempt to produce a second infection gives rise to a reaction more violent than the reaction to the first infection, which has a shorter incubation period and which ends in spontaneous cure. The efficacy of prophylactic vaccination is demonstrated in the results of preventive vaccination against smallpox and against enteric fever.

But when we come to the cure of an already present infection we have altogether different conditions. The protection which has been acquired against a second infection varies in degree and in the length of time it endures in different diseases. In certain infections the reaction is such that the infected organism completely overcomes the invasion and remains henceforth protected against the disease. This occurs in smallpox and in scarlet fever, among other complaints.

In a second class the patient, although protected against a second invasion from without, yet remains infected and is liable to new infections from within—that is, to autoinoculations. This occurs in tuberculosis and in syphilis.

In a third class the protection is apparently of but short duration and seems often to be followed by a period of increased susceptibility, so that new infections may easily take place. This is seen in streptococcal and in staphylococcal infections and in influenza, for example.

What we require to know in regard to the second and third of these classes is whether in a subject whose immunity development has been insufficient completely to overcome the infection we can by appropriate doses of vaccines so enhance the production of immune bodies—i. e., so "build up" the resisting power of the system against a microbe which has entered the body—that the defeat of the invasion is assisted or completed; and whether we can do this without danger of disorganizing the mechanism of immunity and possibly lowering instead of raising the powers of resistance.

As Sir Almroth Wright has put it: "The body has the machinery for immunization, and you can play tunes upon it if you know the laws. If you do not happen to know the laws when playing upon it, it may be quite injurious."

The uncertainty of the results, for most part the disappointing results, of vaccine treatment should perhaps make us pause and ask: Are we at present in a position to play tunes upon the machinery of immunization by means of vaccines after the machinery has already been set in motion as the result of microbic infection?

It may be that vaccine treatment sometimes gives dramatically successful results, and we are perhaps justified in giving this treatment a trial in certain cases of infection where other treatments have failed. But the still prevalent tendency to employ vaccines indiscriminately in all sorts of complaints should be deprecated, because we are not really in a position to

know when we may do good and when we may do harm by this treatment, since we have no means of estimating its effects in a person whose reactivity has been altered, perhaps profoundly altered, as the result of previous microbic infection.

The almost equally prevalent use of vaccines in diseases of non-microbic organ is perhaps of less consequence, but it is apt to delay the employment of a treatment more suited to the case and more efficient.

Unilateral Gynecomasty after Injury to the Testicle.—Apert and Declety relate the following curiosity of medicine: A soldier, aged 25, was wounded in the scrotum in October, 1917. In the following March he was found to have a right breast agreeing in all respects with that of a young girl at the beginning of puberty. Investigation showed that the right testicle had been involved in the injury. Such behavior has been known to follow only mild lesions of the testis—never severe traumatism or total destruction or castration. The precise mechanism cannot be comprehended but both the nervous and endocrinic systems must be involved.—La Presse Medicale.

The Treatment of Wounds of the Chest, with Special Reference to Infected Haemothorax.—Hutchinson, in The British Medical Journal, states that four classes of chest wounds should be distinguished. They are:

1. Non-infected haemothorax or pneumohaemothorax.
2. Open pneumothorax.
3. Infected haemothorax.
4. Foreign body in the lung or the pleural cavity.

Treatment in simple non-infected haemothorax or haemopneumothorax consists in merely aspirating the blood from the pleural cavity. This should be done if dullness extends more than two finger-breadths. Of 450 cases in the author's series, 368 were aspirated. A fair sized trocar is used after cocaine anaesthesia and a small knife slit in the skin. If there is a large amount of blood clot, the blood and clots aspirated, and tight closure made with a final aspiration of retained air. If blood is allowed to remain a long time, the lung becomes bound down by adhesions and a large proportion eventually becomes septic.

Open pneumothorax is treated by prompt closure after cleansing of the wound and pleura. Shock and danger of infection is greatly diminished by this procedure. If there is likelihood of infection, 3 ounces of 1:5,000 flavine solution is left in the chest.

In infected haemothorax it is impossible to aspirate the clot which contains the infection. It is also impossible to sterilize the clot by any known method. A thoracotomy is therefore done under nitrous oxide and oxygen anaesthesia. The hand is inserted, light adhesions are broken down and the clot removed. The cavity is washed out with saline solution and the chest closed, mopping a small quantity of antiseptic over the lung and pleura.

The serum that collects and air left in are aspirated in forty-eight hours. Three or four aspirations are necessary during convalescence. Eusol, "bipp," flavine and saline have been variously used in treating 29 cases in this manner. Certain types of infection seem to lend themselves to this form of treatment better than others. Thus of 11 cases of bacillus aerogenes capsulatus infection, only 3 had to be reopened. Of 7 cases of streptococcus infection, 6 were reopened. Of the whole group of 29 cases, 13 were reopened.

The treatment of a foreign body in the lung or pleural cavity must vary with the three types of hospitals, e. g., the casualty clearing station, the base hospital in France and the base hospital in England. As a result of experience with 450 cases and from reports from other surgeons, Hutchinson is convinced that no attempt should be made to remove a foreign body from the lung while the patient is in a base hospital in France.

Of 27 deaths that occurred in this series, 11 died of septicaemia, and four due to pocketing, all in drained cases. Gas gangrene of the chest wall was present in three cases.

Erythredema.—Under the name of erythredema, Dr. H. Swift, of Adelaide, describes a condition occuring in infants, characterized by swollen bluish-red hands and feet and disordered digestion, followed by notcieable muscular weakness. Dr. Swift has seen 14 cases in all, the youngest being aged 6 1-2 months, the oldest 15 months.

The condition seems to commence with digestive disturbance with very marked anorexia. The bowels are generally opened three or four times a day, and the motions are greenish and contain undigested food particles. Sleeplessness is also common and the infant is usually restless and fretful. After a few days a characteristic appearance of the hands

and feet develops; they are noticed to be swollen, bluish-red, cold and clammy, while the skin of the palms of the hands and between the fingers and toes is often sodden and desquamating. The skin of the trunk is sometimes covered with a fine papular discrete miliaria. The temperature is subnormal as a rule, the pulse is small, compressible, and rapid, and the urine is scanty, pale-straw colored, containing excess of phosphates but no albumin. The tongue is pale and coated with a slight streaky fur; the abdomen is flaccid and retraced. No abnormality was detected in the blood in the cases examined except slight diminution of the number of the red blood corpuscles in one case. Blood cultures have invariably proved sterile, and no diphtheria bacilli were found in swabs taken from the nose, throat, and ear. There is general wasting of the muscles, most marked in the larger muscles, such as those of the thigh, but no actual paralysis has been observed.

The prognosis in this condition is favorable, though convalescence is very slow, months often elapsing before recovery is complete. Dr. Swift discusses the diagnosis of erythredema from multiple neuritis, erythromelalgia, Raynaud's disease, and congenital heart disease. In regard to treatment, he urges the necessity of first finding some food that the infant will take and digest, often a matter of difficulty owing to the extreme distaste for food, which is one of the features of the disease. He advises great care in regard to the toilet of the skin, and recommends warm clothing. Massage to the limbs should be commenced as soon as possible. For the diarrhea castor-oil, or small doses of grey powder, followed by bismuth, should be given. Calcium lactate in 3-grain doses three times a day seemed to be beneficial in some cases, in others it failed. In other cases ½-grain doses of thyroid gland of ¼-grain doses of pituitary extract were given. It will be of interest to know if cases of similar character have been observed in this country.—The London Lancet.

The Early Diagnosis of Sciatica.—The clinical and medico-legal recognition of sciatica is not infrequently attended with considerable difficulties, especially when, being, as yet in an early stage, definite objective symptoms of atrophy and hppo-reflexivity are wanting. This problem, owing to present war conditions which have increased the number of cases suspected of malingering, has thus become more urgent and important, and new and more acurate researches on the subject assume a greater interest. Dr. Andrea Roccavilla has recently (La Riforma Medica, Feb. 23, 1918) described several new signs which may be helpful in forming an accurate diagnosis in doubtful cases where the usual classic symptoms are absent or not as yet fully developed. We give a resume of the more important of them:—

1. Painful hypersensitiveness in the testicle of the affected side. In cases of true sciatica there is marked hyperalgesia on pressing the testicle between the fingers, evidenced as genuine by pupillary contraction, increased pulse-rate, and arterial hypertension. It is more sensitive than the evidence obtained by pinching the adductor muscles of the thigh than the so-called Gibson's sign, exaggeration of cremasteric reflex, although it is in direct physiological relation to them.

2. Sacro-coccygeal tenderness by digito-rectal examination. Presure on the pelvic wall on the affected side by the finger in the rectum causes pain, more intense than that produced by pressure on the first and second sacral spines or on the femora-gluteral fold and along the course of the sciatic nerve (signs of Trousseau and Valleix).

3. Diminution of electrical resistance in the limb. Each leg is sucessfully immersed to the same level in a bath connected with one electrode, the other electrode being in contact with the limb under examination. The difference between the resistance of the affected and healthy limb may be as much as 5-6 milliamperes. In less severe or early cases the variation between the limbs is less evident, but the proportion of cases in which this sign is positive and appreciable (2-3 milliamperes) is as high as 7 or 8 in 10, and the importance of the symptom lies in being objective.

4. Popliteal hypo-reflexivity. External and internal popliteal reflexes can be elicited by striking with a clinical hammer the tendons of the semi-membranosus and semi-tedinosus muscles on one side and those of the biceps femoris on the other, about two fingers' breadth above the middle horizontal line of the popliteal space. The importance of the investigation of these reflexes lies in the fact that whereas these three muscles are supplied by branches from the sciatic nerve, the reflex spinal center is at a higher level than in the homologous achillar tendon reflex, which may be of

value from the point of view of early or doubtful diagnosis. But the popliteal reflexes in sciatica do not invariably follow the general rule of hypo-excitability, for exceptionally and especially at the onset of the disease they may, like the achillar reflex, be exaggerated; this period, however, is of short duration, for even before signs of neuritis appear the popliteal reflexes become progressively feeble and finally abolished. Contemporaneously with this period of onset a curious penomenon may be observed, which consists in a simultaneous existence of a popliteal hypo-reflexivity with a patellar hyper-reflexivity, so that a very slight stimulation of the upper tendinous boundaries of the popliteal space produces a marked extension, instead of flexion of the leg on the thigh (inverted reflex)—i.e., the stimulus is propagated to the patellar tendon instead of exerting itself on the tendons struck.

5. Dissociation between the idiomuscular contractility of the gastrocnemii and the achillar tendon reflex. This sign is evidenced by a contemporaneous hypo-excitability of the Achilles tendon with an idiomuscular hyper-excitability of the belly of the gastracnemius, as shown in flexion of the leg on the thigh following percussion on the lower part of the muscles, so that while mechanical stimulation of the Achilles tendon does not produce the usual extension of the foot, or does so in a very slight degree, analogous excitation of the muscular mass determines a flexor reaction of the leg to a much greater degree than normal. The importance of the sign lies in its early appearance and in the fact that it is most evident precisely at a time when the majority of the other symptoms have as yet to reach their full development.

6. Behavior of the small reflexes of the foot. These show early appreciable modifications, in that, after a period of transitory hyper-excitability, which coincides with the initial phases of the disease but which may be althogether absent, they undergo progressive enfeeblement until their complete disappearance. This occurs in about 7 cases out of10.

Dr. Roccavilla futhermore draws attention to the following important facts. In the cases where the lesion, instead of being total or truncal, is purely fascicular or of the ascending type, then Lasegue's crossed sign and Gibson's are not very marked, whereas Gowers's sign and those relating to the Achilles tendon and small muscles of the foot and plantar hypo-reflexivity are strongly so. Vice versa, in cases where are sciatica is truncal and descending there will be prominence of Gibson's and Trousseau's signs, hyper-albuminosis and lymphosytosis of the cerebro-spinal fluid, rectal hyperthermia and hyperalgesia, testicular tenderness, adductor phenomena, hypotrophy of the thigh, and popliteal hypo-reflexivity.—The London Lancet.

Tumor of the Mediastinum and Scrofibrinous Pericarditis.—Soulie and Benhamou (Paris Medical) point out that, apart from the hemorrhagic pericardial effusion which often develops in the terminal stage of mediastinal tumore there sometimes occur instances of ordinary serofibrinous pericarditis accompanying such a tumor, yet so pronounced as to dominate the clinical picture and cause the subjacent growth to be overlooked unless special care in the diagnosis is exercised. Serofibrinous pericarditis should naturally bring first to mind the thought of a tuberculous condition, of rheumatism, or of nephritis; but where, as in the case reported by the authors the area of dullness is of unusual shape and the X-ray shadow differs from the pericardial shadow, as described by Vaquez and Bordet, an underlying mediastinal tumor should be thought of. In the author's case the pericarditis was enveloped by the tumor, which had invaded and irritated the pericardium, causing a symptomatic pericarditis. In the presence of serofibrinous pericarditis, mediastinal tumor should likewise be thought of where manifestations of increased mediastinal pressure have already existed for some time. Persistent of recurrig hoarseness, a raucous voice, and a barking, paroxysmal cough, are all early symptoms of such increased pressure. Systemic X-ray examination of the mediastinum should be availed of in all cases. Anisocoria, in the absence of aortic aneurysm and of syphilis, is a valuable sign of mediastinal tumor. Tumor should likewise be thought of where precordial pain precedes by several months the symptoms and signs of pericarditis, or where, after paracentesis of the pericardium the functional symptoms of pericarditis, viz., dyspnea, angor, and precordial pain, rapidly recur and the X-ray shadow remains practically uninfluenced by the puncture. Relative youth of the patient does not eliminate the possibility of a tumor subjacent to a serofibrinous pericarditis. The author's pa-

tient was twenty-four years of age. Early diagnosis of mediastinal tumor may permit of surgical interevention. In the author's case there was intimate adhesion between the growth and the lungs, preventing removal of the growth. Decompressive thoracotomy, where nothing more can be done, may greatly prolong life in case in which pressure rather than toxemia is the lethal factor.

The Du Pont Chemical Works, Equitable Building, New York City, has just issued a new pamphlet that will be of interest to manufacturers of builders' trunk and fancy hardware, lighting fixtures, silver and gold novelties, also articles made from wood, celluloid and glass that require a water and air-proof coating.

It describes a line of lacquers in three grades, suitable for practically all purposes for which lacquers are used.

The Central Canal of the Spinal Cord.—Kramer (American Journal of Insanity), calls attention to the possible importance of the central canal of the spinal cord in the pathogenesis of poliomyelitic disease. This canal is open in animals and young children, but authorities disagree as to its condition in adults. The author examined 206 spinal cords of which sections were made in the cervical, dorsal, and lumbar segments. When the canal was found open in all these localities the whole cord was set aside for study and sectioned at intervals of five millimeters throughout its length. The central canal was found open throughout in fifteen instances, or 7.23 per cent. The author believes that drugs or toxins can very easily be carried upward through an open canal into the central gray matter. This would explain the fact that poliomyelitis is essentially a disease of infancy and childhood, as in this period the canal is probably always open; he thinks that in all cases dying of this disease the cord should be examined, in order that more light may be thrown on this possible route of infection.

German Health Resorts.—The thermal and climatic stations of Germany and Austria before the war enjoyed an income of about 900,000,000 francs, while those of France received not much more than one-fourth of this huge sum. After the war the foreigner will visit France in preference to the Teutonic countries as a matter of sentiment and the French health resorts will have an unprecedented boom. The French statesmen look forward to this source of revenue as one of the principal ways of rehabilitating their country's prosperity.—La Presse Medicale.

Chancroid of the Vagina.—Courtade reports two cases of this rather rare localization; this infrequency may be only apparent, for unless the speculum is used in routine work one can never be certain of their absence.—Annales des Maladies Veneriennes.

Mercurial Injections in Sodoku.—Borelli having in mind the supposed sprochetic nature of this affection, has tested injections of sublimate in the attempt to ascertain if the well known tendency to exacerbation is favorably influenced. The results appear to have exceeded anticipation, so unmistakable were they in this regard. However, the ultimate state of to be determined.—Il Policlinico.

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THE PATHOLOGY AND THE CYSTOSCOPIC DIAGNOSIS OF THE TABETIC BLADDER.

By Richard N. Duffy, M. D., F. A. C. S.,
New Bern, N. C.

Of the early symptoms encountered in tabes dorsalis disturbances of the function of the bladder are frequently among the first. The patient notices in the beginning an increased frequency of urination accompanied perhaps by some dysuria. Later there is an increasing difficulty in urination which may eventuate into a complete retention requiring catheterization and finally an overflow incontinence.

In order to get a clear idea of the pathology of this condition it will be necessary to first consider a few points concerning the anatomy and physiology of the bladder and the central nervous system.

For practical purposes the musculature of the bladder may be considered to consist of only two parts: a de-trusor muscle and a sphincter. The de-trusor as a matter of fact is composed of three layers of fibres; an outer layer of meridianly running fibres, a middle layer of circular fibres which constitutes the bulk of the de-trusor and a thin inner layer running in the same direction as the outer layer.

The nerve supply of the bladder reaches it through the tangled mass of nerves and ganglia known as the hypogastric plexus. This is connected with the sacral cord by the N. erigens through its connection with fibres from the second and third sacral nerves, and with the lumbar cord through the N. hypogastricus by way of the inferior mesenteric ganglion.

The de-trusor and the sphincter have each a distinctly different innervation. Certain fibres in both the N. hypogastricus and the N. erigens go to both sets of muscles but the fibres of each nerve going to the different muscles have opposite effects upon these muscles when stimulated. By stimulation of the N. hypogastricus the sphincter contracts and the detrusor relaxes. By stimulation of the N. erigens the reverse action occurs. As is well known, the earliest lesions in tabes occur in the dorsal roots of the spinal nerves, usually in the sacral and lumbar regions, and thence extend to the ramifications of these roots into the contripetal nerve fibres, known as the exogenous fibres, in the posterior columns of the spinal cord. Later the endogenous fibres arising from cells in the grey matter of the cord and proceeding upwards in the posterior columns are affected. In very advanced cases nearly all of the fibres o fthe columns of Goll and Burdach are involved. There are also fibres which go to the posterior horns from the posterior roots and others which go through the posterior to the anterior horn cells, being concerned in the production of reflex actions. These fibres likewise become degenerated, as well as certain fibres which decussate in the cord and proceed upward in the lateral columns. All sensory impulses originating through the spinal nerves therefore become more and more blocked as the disease advances and likewise the motor impulses depending upon sensory stimulus for their origin.

The emptying of the bladder is a reflex act as it occurs in infants and in cases of injury to the spinal cord involving a cessation of sensory impulses to the brain. The de-trusor muscle is undergoing constant contraction and relaxation. The sphincter remains the greater part of the time in a state of contraction.

The mechanism of urination is supposed to be as follows: The constantly increasing accumulation of urine supplies a constantly increasing stimulus to the mucous membrane of the bladder. The constantly recurring contraction of the de-trusor on the increasing supply of urine increases the pressure within the bladder during each contraction. Finally, when the pressure reaches about 150 mm. of water, contripetal impulses go to the spinal cord which stimulate reflexly a further contraction of the de-trusor through the N. erigens and an inhibition of the tonic impulses going to the sphincter through the N. hypogastricus there is thus a relaxation of the sphincter and the contraction of the de-trusor drives the urine out.

Although this is essentially a reflex action, still in the normal individual it is to a certain extent under the control of the will, as the act can be stopped or started within certain limitations through the volition of the individual.

With the preceding facts in mind one can explain the bladder phenomena in tabes.

In the very earliest stages of tabes the lesion appears to be a thickening of the meninges about the posterior spinal roots, especially in the sacral region. This thickening causes pressure on the posterior roots which results first in irritation of the fibres and later degeneration. The various paraesthesiae complained of in the early stages of tabes have their origin in the early irritation of the posterior roots, the sensations produced thus being referred by the brain to the areas supplied by the corresponding nerves.

The frequent desire to urinate may be explained by such an irritation of the second and third sacral roots, the irritation being interpreted as sensations from an overfull bladder and therefore setting in motion the emptying reflex. The dysuria may likewise be explained by excessive stimulation just as there occur the lightning pains, the various crises girdle pains, etc.

Later the fibres begin to degenerate. There occurs then an inco-ordination of the reflex act. There is a degeneration of the connecting fibres which cause the setting in motion of the inhibitory impulse of the tonic sphincter contraction and we then have retention of urine. This is in the early stages associated with continued clonic contractions of the de-trusor from the stimulus of the contained urine.

Finally the disease becomes so advanced that sensory impulses cease to come from the bladder and we have a dilated bladder and an overflow incontinence. The urinary stasis favors decomposition of the urine and concomitant infection.

The cystoscopic picture in these cases varies with the stage of the disease. In the very earliest stage when there is simply a complaint of frequency of urination, with perhaps pain, the cystocope shows a perfectly normal bladder.

Later when there is difficulty in voiding, the cystoscope is found to enter the bladder easily, showing that the urethra is entirely patent and there is no obstruction at the vesical neck. Notwithstanding this the bladder is found to be quite markedly trabeculated and there may be seen several patches of a beginning cystitis, more frequently in the neighborhood of the trigone; especially is this true if the patient has been having a catheter passed.

If the bladder is examined again in the early stages of the overflow incontinence, the same picture will present itself except that the trabeculae are seen to be flattening out and in some areas the bladder wall may appear quite smooth. Finally, still later the trabeculae disappear entirely and the bladder appears quite smooth. The areas of cystitis are more marked and more extensive. Practically the whole bladder may show a diffuse cystitis with areas of intense congestion or ulceration and much mucus may be seen attached to the bladder wall or floating in the distending medium.

The following two cases of this condition seen in the Beth Israel Dispensary, New York City, illustrate two different phases of the disease. The first case was a female, 40 years of age, complaining of incontinence. The cystoscope in this case passed perfectly easily. The bladder was found to be quite markedly trabeculated with an early flattening of the trabeculae. The ureteral orifices were normal. There were several patches of low grade cystitis. A Wassermann test in this case revealed a positive reaction. This was an early stage of the overflow incontinence.

The second case came in with a marked ataxia and was wearing a urinal as the urine constantly dribbled from him. In this patient the cystoscope also passed easily. The bladder showed only an indistinct trabeculation in areas with a smooth bladder wall in between. There were also in this case several patches of a low grade cystitis.

Conclusions:

((1) It is possible for the cystoscopist to be the first to diagnose a beginning tabes in certain instances where the bladder symptoms constitute the predominant feature.

(2) In patients complaining of frequent urination, especially if this is accompanied by dysuria, and in whom examination of the urine, the urethra and adnexa and the bladder is negative, tabes should be thought of and the patient tested for absence of knee jerk, the presence of Argyll-Robertson pupil, and the Wasserman reaction in the blood and spinal fluid.

(3) In patients complaining of difficulty in urinating in whom no obstruction is found to the outflow of urine and the cystoscope shows a trabeculated bladder, a nerve lesion is the cause of the trouble and the most probable diagnosis is tabes. Subsequent test should confirm this.

(4) In patients suffering from an overflow incontinence in tabes, the diagnosis is only too evident and requires no special consideration.

SOME STUDIES ON THE FUNCTIONS OF THE THYROID.*

By E. H. Bowling, B. S., M. D., Durham, N. C.

The action of the ductless glands is little understood and it can be predicted with reasonable certainty that some of the coming great discoveries in medicine are going to be along this line.

The adrenal, the pituitary and the thyroid all exert an effect on the economy that is now little understood. It is only in the recent past that it was discovered that the pituitary extract exerted a most wonderful influence on the gravid uterus and we who remember the trials of the accoucher before the days of pituitrin can recall numberless instances when if we had been armed with this wonderful weapon could have saved ourselves countless hours of sleep and suffering womankind untold agonies of the pasturient bed.

As this paper is to be confined to a study of the thyroid I will resist the temptation to wander around in the fields of theory as regards these other glands as tempting as the vista may be, but confine myself to a study of this very wonderful and little understood organ.

There are a good many things we know about the thyroid and a great many suspected functions which are as yet in the realms of theory, but, which it is hoped that future investigation may elucidate and add to the sum total of our knowledge in regard to this wonderful gland. We know that there are certain waters, notably in Switzerland and Wisconsin, that whoever drinks thereof, be it man or beast, certainly gets an enlargement of the thyroid gland. It has been proven for man, that if these waters be first boiled, that they have no effect on the thyroid. This would seem to prove beyond doubt that there are in these waters some form of bacterial life that is first absorbed by the thyroid, which acts as an irritating agency.

Now if the bacteria in these waters exert this influence on the thyroid is it a stretch of imagination to believe that all germs that find ingress into the blood have an influence on th ethyroid and that these specific germs act as an irritant to that gland? There is in Brazil a certain fly that whoever it bites and infects gets an enlargement of the thyroid and from the same cause.

In my studies of pellagra I have found that without exception every advanced case had some derangement of the functions of the thyroid, not necessarily an enlargement but a derangement of functions, and the insanity that follows in the wake of advanced cases is, in my opinion, nothing more than an aggravated hyperthyroidism. We know that the thyroid exerts a decided effect upon the sexual functions and the sexual functions in pellagrins is pronouncedly stimulated.

The thyroid has long been known to affect the mental status of the individual. This is very noticeable in cretinism and it is the opinion of some observers that cretinism is nothing more than a hypothyroidism.

Hyper and hypothyroidism have been observed and studied by a great many careful and painstaking observers. One of the most notable examples of hyperthyroidism on record is the Emperor Napoleon. This man with a pronounced hyperthyroidism, where every nerve was spurred on by the whip of the colloid substance secreted by the thyroid gland, was the man of indomintable energy, who could tire out relays of secretaries and who seemed never to feel the need of rest; who by his indomintable energy led his victorious legions to every capital of Europe and who figuratively held a trembling world captive in his grasp, finally became myxodematous and at the battle of Waterloo sat and slept while the fate of empires trembled in the balance. Had he been the same Napoleon of a decade before the history of the world might have been written in quite a different strain.

It is well known that the thyroid exerts a most marked effect in the growth of the child. Where the thyroid is removed, it arrests the further development of the child and this accounts for the midgest that are exhibited in circuses, a ceasing to function of the thyroid arrests growth and the man of fifty may only be the size of a boy of ten. Would this not account for the fact that in some sections the men are mostly all of small statue while in other sections they appear as veritable sons of Gog and Magog. Practically all Frenchmen and Japanese are of short statue, while Russians and Germans attain to gigantic proportions. Is there something in the water or the soil that by stimulating or inhibiting the action of the thyroid which accounts for this?

As cretinism is known to be caused by a lack of function of the thyroid and as the body temperature of all cretins is sub-

*Read before the meeting of the Tri-State Medical Association of the Carolinas and Virginia, February 19th, at Richmond, Va.

normal it seems reasonable to adduce that one of the functions of the thyroid is the regulating of the body temperature. As all fevers are caused by germs of one sort or another, or their toxins why not conclude that fever is only the manifestation of a stimulated thyroid action, brought about by the poison, whatever its nature, in the circulating medium? The effect of the thyroid on the stomach secretives offers a field for wide investigation. It is my belief that the secretion of hydrochloric acid and possibly of pepsin is entirely dependent upon the action of the thyroid. I have proved to my own satisfaction that hydrochloric acid is entirely absent in all advanced cases of pellagra. My theory is, that while we may have hyperchlohydria in the beginning of the disease that as the system becomes more and more saturated with the germs or their toxins, this inhibits the action of the thyroid and it fails to send the stimulating impulse. It is known that during the existence of any continued fever that the gastric juice contains no hydrochloric acid. A vast majority of pregnant women suffer with an excess of hydrochloric acid. If we put two and two together we see that in the acute infections, with fever there is an immediate stoppage of the secretion of hydrochloric acid. In the chronic infection of pellagra, there is a slower but just as certain ceasing of the secretion; in the pregnant woman in whom we know that the thyroid is enormously stimulated, we get an excess of the secretion, it seems to me that the inference would be so plain that we could not come to any other conclusion, that the thyroid is really the stimulus that causes the secretion of hydrochloric acid in the stomach. Enuchs have no beard, nor the bass voice, if the testicular glands can have this effect it would not seem unreasonable to suppose that the thyroid which has so many known effects on the nervous system, could have added to its catalogue of beneficent purposes the stimulation of hydrochloric acid in the stomach—a function which has always been more or less of an enigma.

As remarked before in this paper, the thyroid is known to exert a marked influence on the sexual function. We have all noticed that all of the noted actresses; those who have become famous for their vivacity and verve have well marked and prominent thyroids. The poets have sung of the swan like necks of the fair enchantress and a beautiful neck and a well developed thyroid is a prize possession of her who is so fortunate as to claim it.

If the thyroid then is of such a prominent and pronounced factor in the nervous, sexual, mental and physical well being of mankind is it not high time that we were devoting some of our energies in discovering means of correcting the faulty action and inhibiting its over secretion? Who of us have not been puzzled with the globulus hytericus of the hyperthyroidic, hysteric female? Who of us has not tried to soothe the over stimulated nervous system of this class of patients with the bromides valerian and soporifics, without one ferreting out the real cause—a superactive thyroid? Who among us has not spent fretful hours worrying with the carking cares of the hypochondriac with his multitude of ailments only limited by the catalogue of the medical dictionary, without once thinking that if we could stimulate his thyroid that most if not all of these imaginary complaints would fold their tents like the Arabs and as silently steal away?

The anaemic mother with her vitality sapped by too frequent child bearing and too constant nursing with her nerves on a wire edge wil be found to have the diminutive thyroid and a lessened secretion of colloid substance. The waddling matron, fair, fat and forty, can be made more spry and be enabled to exercise in comfort and enjoy life more fully if we give her long continued treatment of phytolacca decandra and correct the faulty action of her thyroid. I am thoroughly convinced that all cases of obesity are attributable to a faulty action of the thyroid.

If these theories, advanced largely in observation are in a measure correct then what method of procedure shall we pursue to correct the variations from normal of this important organ? The pharmacophea is almost silent as to drugs that will influence the action of the thyroid. Almost the only drug that is mentioned in this connection is iodine and this in my opinion is used largely in an empyric manner. I think very few of us get satisfactory results from its use. I have found that the chlorine group have a more marked effect on my patients than the iodine group. I have used more or less the whole chloric group from freshly made chlorine water to the various salts, and the drug that has proven itself the most satisfactory is the chlorate of potash. I am convinced that there are potential possibilities in the use of this drug that are now little suspected. In my hands this drug acts somewhat like digitalis in heart affection, it will stimulate a

sluggish, and inhibit an over-active organ. The chloride of ammonia is the best single remedy I have ever used for goitre.

The tincture of poke root, does more to relieve obesity than any single remedy at our command.

The ungarnered field is yet vast. There are great store houses of knowledge yet unopened in this fertile field. May the doors soon be unlocked that we may all profit thereby.

MENINGITIS.

By Hyman I. Goldstein, M. D., Camden, N. J.

I wish to report three rather interesting cases, one, a tuberculous meningitis case occurring in an adult; the second, a case of meningitis in a newborn infant; the third, a case of epidemic cerebro-spinal meningitis in a young child; the fourth, a case of tuberculous meningitis in a boy 17 years old, and the fifth, a case of "serous" or non-bacterial toxic meningismus in a little boy—complicating otitis and broncho-pneumonia; and to briefly discuss the symptoms and more important diagnostic and therapeutic features of meningitis in general.

Case 1.—The adult patient, Mike B., an Italian, male, aged 33 years. Married nine years. Had one child, which died two hours after birth. Was always pretty well. Denies venereal disease. Was in Brazil eight years ago, where he had an operation for hernia (?). Has been sick one week; had chill, severe racking headache and excrutiating pain in the back, marked constipation, and vomiting. The headache was frontal principally, but also on "top of head," and later occipital; some fever, temperature 102 deg., pulse 84. He had no convulsion, ocular palsies, or nose, ear or throat symptoms.

We have, then, the usual symptoms of the onset of meningitis. The slow pulse, becoming irregularly slow, is probably explained by the difference in the degree of intracranial pressure. There was no herpes, facialis or labialis, and no petechiae or purpuric spots. There was some hyperesthesia of the skin, especially over the abdomen. The absence of slow pulse and herpes does not eliminate the diagnosis of meningitis. Their presence helps towards a positive diagnosis. He later began to gnash and grit his teeth almost constantly, especially in his sleep. The neck became moderately retracted and quite rigid. No myoidemas. His blood pressure when first seen was 145 systolic and 90 diastolic. There was no Kernig, Babinski or Brudzinski signs; pupils were equal. The next day his pulse was only 74, and slight fever still continued. There was no dermographia, and no eruption at any time. He had difficulty in urinating and finally had to be catheterized repeatedly. Widal reaction was negative. Culture of sputum showed many streptococci and few staphylococci. Malarial parasite not present in blood. Blood culture was negative. Blood Wassermann on two occasions was negative. Spinal fluid Wassermann was negative. No typhoid bacilli and no pyogenic bacteria in the blood. Animal inoculation with spinal fluid, sputum or blood serum were not done, as the later progress of the case left no room for doubt as to the diagnosis of tuberculous meningitis.

There was harsh breathing over the left apex; no rales; some signs of impairment; no cardiac murmurs; urine, negative. Later on, a sputum specimen examined at the University Hospital showed tubercle bacilli present.

Blood—4,570,000 R. B. C., 5,800 W. B. C., Hb. 88 per cent.; W. B. C.—66 neutrophiles, 26 lymph, 5 large mono., 1 trans., ieosino., 1 baso.

Lumbar puncture—fluid under 20 mm. pressure about 15 or 20 c. c. removed. Slightly yellowish. Not clear. With Wright's stain showed great excess of lymphocytes. No Xanthochromia. The Widal, spinal and blood Wassermann were again done at the University Hospital and also proved negative. Spinal fluid—examined for micro-organisms, but report was negative (not reeated). Cells were not very numerous but there were about 20 per field. Leucocytes 175 to c. mm.; lymphocytes, 85 per cent.; polymorphonuclears, 4 per cent.; endothelial, 11 per cent.

The urine now showed some albumin, and a few granular casts. At the suggestion of Dr. Alfred Stengel, urotropin grains X in 20 c. c. saline solution, were given intraspinally daily, after removal of a similar amount of spinal fluid. No episthotonos. Pain in the back of neck and down the spine and hyperasthesia increased. Kernig's and Brudzinski's "frog sign" and identical reflex ("controlateral" reflex) were present. Babinski reflex absent. Before death the man suffered excruciating pain, and was markedly emaciated.

Case 2.—The second case I wish to report was seen by me on April 12, 1918, for the first time. A small, poorly-developed infant twelve days old. (Vanda Z.) The infant had been fretful, crying, restless,

and did not take the breast for two or three days. Was delivered by midwife. Had "twitchings" and convulsions a day or two before seen by me. Neck was rigid. Child cried on being touched or turned over, or if an attempt was made to pick it up or raise its head. The next day, all the typical text-book signs and symptoms of meningitis were present. At the Cooper Hospital, lumbar puncture was tried. No spinal cultures were made. Culture from the sore, fetid and inflamed umbilicus, showed staphylococcic and diphtheroid bacilli (colon bacillus?). No tetanus organism, no streptococci and no meningococci could be found. The discharge about the umbilicus was yellowish and foul. This was a case of meningitis beginning about 7 or 8 days after the child was born, of umbilical origin, the infection originating through the contaminated water, probably used in bathing the infant. Child died 14 1-2 days after birth. Father's Wassermann (blood) was negative. Mother had worked in cigar factory until 6 weeks before birth of child. Primipara.

I report this case because meningitis is exceedingly rare in young infants. Moses Barron in a careful review of the literature (Amer. Jour. Med. Sciences, September, 1918), only found 39 cases reported in infants under 3 months old. Of these 39 cases, only 19 were in new-born. The umbilicus is the most important route for such infection according to La Fetra. Rasch, Koplik and Aschoff believe that the avenues of infection of the middle ear, that of the Eustachian tube and of the external auditory canal are most important. Barron concludes that meningitis: (1) In the new-born and in early infancy is a rare disease; (2) that the bacillus coli occupies, in the early months of infant life, the important place that the bacillus tuberculosis holds in the meningitis of later infancy.

Seven of the 19 cases in new-born were due to the bacillus coli and 6 cases were caused by the staphylococcus and streptococcus. 75 per cent. of all cases of tuberculous meningitis in children occur before the fifth year. The largest number occur during the second year. (Smith, Illinois Med. Jour., 1913, No. 3, XXIII., 299), Holt (Amer. oJur. Dis. of Child., 1911, I, 26)—in a review of 300 cases of meningitis in children u pto 3 years old —found B. tuberculosis was responsible for 70 per cent. of this series, but only 1 per cent. was in infants under 3 months old. If epidemic meningitis be excluded, from 55 to 70 per cent. of all cases of meningitis in infants and young children are tuberculous in origin. Besides the auditory canal, eustachian tube, and umbilicus the mouth (by means of fingers or instruments of accoucheur), spina bifida, and the intestinal tract may be portals of entry of infection in meningitis of newborn. Some infections occur in the bathtub through water that has become contaminated. Breast-fed babies have greater resistance than artificially-fed ones, probably due to the compensation of the passive immunization by the breast milk for the active immunization which is still deficient.

Case 3.—Emma Z., age 5 years, white, female child, had influenza and pneumonia (?) several weeks ago—and has been ailing with fever, etc., up to the time I first saw her. At this time she had stiffness of the neck, strabismus, positive Kernig sign, cerebral tache (Trousseau's Sign); Squire's Sign—a rythmical dilatation and contraction of the pupils caused by extending and flexing the head), "scaphoid" abdomen and emaciation; outcrying—frequently, etc. At the first lumbar puncture about 55 c. c. of fluid was withdrawn under considerable pressure, this fluid was clear, no micro-organisms were demonstrable, cell count 920 per cu. mm., Polymorphonuclears 70 per cent. Mononuclears 26 per cent, Noguchi globulin test, positive; Heller's test, positive; Acetoferrycyanid test, positive. Reducing substance absent. Lactic acid, positive; 1 drop. KMNO-4 test, positive, 5 seconds. Wassermann test negative.

A tentative diagnosis of tuberculous meningitis was made. At the second lumbar puncture, about 40 c. c. of slightly turbid fluid was withdrawn. Upon centrifuging a thin purulent sediment formed. Numerous pus cells, of course—Polymorphonuclears 85 per cent.

Noguchi globulin test positive. Reducing substance, trace KMNO-4 test positive, 10 seconds. Heller's test positive. Acetoferrocyanid test positive. Meningococcus present intracellularly in extremely few numbers. On November 12th, the report from Dr. A. I. Rubenstone, pathologist and bacteriologist of Mount Sinai Hospital, showed a finer purulent sediment to be present in the fluid taken at the third lumbar puncture. There was also present meningococci in few numbers—these were relatively decreased in numbers. 60 c. c., C. S. fluid were withdrawn at fourth lumbar puncture. Fluid was fairly clear, with only a thin purulent sediment. Pus cells. Meningococci present in some numbers

and many were extracellular. The patient had so far received three intraspinal injections of Polyvalent antimeningococcic serum (of 30 c. c. each)—Mulford's, or a total of 90 c. c. Internally, bromides were given. Enemata of salt and bicarbonate of soda solutions. Sodium bicarb., citrate of potash and soda were also given by mouth. Urotropin was not used—because **a distinctly acid medium** is necessary for its efficient action, the cerebro-spinal fluid is alkaline. A dilute solution of Liquor Thymolis Comp. was used in the nose and throat.

In this case (Emma Zane) **Gower's sign** was present, i. e., slight pressure, as one knee on the other, or slight irritation would very promptly cause a red spot or patch. The application of the very mildest irritant or heat, etc., was surely liable to cause **vesiculation.**

The finger-nail drawn very lightly over the abdominal integument was followed by a congested red streak that persisted for several minutes (Trousseau's sign—tache cerebrale). Idiopathic muscular spasm (myoidema) was not very evident.

Very early there was disturbance of the third nerve—pupillary inactivity and a tendency to **Miosis** which then gave away to wide dilatation. At present pupils are widely dilated (almost fully so). There is paralysis (December, 1918) of extraocular muscles.

Iodoform emulsion injections within the spinal canal was not tried in any of the cases.

Jacobi, New York Medical Journal, 1895, suggests that where the meningitic process is confined to the cerebrum draining by the lumbar puncture may carry the infection down the cord and thereby extend the disease. It is impossible from the lumbar extremity to force fluids of a therapeutic character into the arachnoid spaces above the cervical region, unless puncture is also made into the ventricular space of the brain, when the fluid passes very readily from one end to the other of the cerebrospinal meningitis. Jocobi advocates flushing of the C. S. axis by means of both the lumbar puncture and a small trephine opening with drainage from the lateral ventricle.

Vaccine therapy is recommended, even in meningococcal meningitis, by Florand and Fiessinger (July 15, 1918, Bulletins de la Societe Medicale des Hopitaux, Paris) and Netter states that intramuscular injection of the serum often proves useful to supplement the intraspinal injection in cases of meningococcus septicemia, and Netter also had encouraging results with vaccine therapy in cases rebellious to serotherapy.

Case 4.—Dr. Walter L. Niles, of Bellevue Hospital, New York, recommends that sterile horse serum or even anti-meningococcic serum be given intraspinally, as this may set up a cellular reaction, and may do some good in the hopeless and tuberculous cases.

Serum disease is an anaphylactic phenomenon, evidencing the sensitization of patient's cells to horse serum. Eosinophilia is often found and there may be a delay in the coagulation time of the blood. It develops 8 to 10 days after the first injection and is manifested by joint pains, urticaria, etc. Joint pains are a common symptom. It is important not to mistake it for an exacerbation of the infection itself and so give more serum. If this mistake is made the meningitis symptoms will increase temporarily or if several days have elapsed since the last injection there is danger of anaphylactic shock.

Meningococcic Meningitis—Meningococcic infection is irregular in every symptom and treacherous relapses may occur or a subacute serous, or chronic meningitis may develop. These latter are rare if the serum is administered early in the case.

Cerebrospinal Meningitis is an infectious disease of the pia mater and arachnoid membrane of the brain and spinal cord.

Etiology—The commoner causes are diplococcus intracellularis, bacillus tuberculosis, pneumococcus, streptococcus, pyogenes, staphylococcus pyogenes, and bacillus influenzae. Epidemic cerebro-spinal fever or spotted fever is due to the diplococcus intracellularis meningitidis (Weichselbaum).

Symptomatology—The incubation period is unknown, but is brief. There is a prodromal period consisting of rachialgia, joint pains, lassitude, headache and vomiting, backache and constipation. The actual attack usually begins abruptly with a chill, raging headache and vomiting. Convulsions are common in children. Backache and pain in servical spine are prominent symptoms. Dysphagia, moderate elevation of temperature, photophobia and strabismus, herpes and petechial eruptions may be present. Convulsions are rare in adults. Ptosis is common. Anesthesia of the cornea and conjunctiva occurs in 5 per cent of the cases according to Burville-Holmes (Jour. A. M. A., 1908, L. 280), giving rise to conjunctivitis. Purpuric spots may appear. Sighing respirations and Cheyne-Stokes

breathing. Delirium appears in some cases quite early, in others not at all. oMtor irritation symptoms are quite common, such as twitching of single or group muscles, muscular contractions. Tonic spasms of muscles of the extremities may set in and myoidemas may be elicited. Leucocytosis (polymorphonuclear) usually present.

The Kernig's sign is explained by the irritation of the meninges of the lower portion of the spinal cord and of the nerve-roots that constitute the cauda equina, together with intraventricular pressure. It is sometimes also seen in tetanus and typhoid fever. Brudzinski or "frog sign" is, when you flex the chin upon the chest with one hand while you steady the patients with the other, the arms are drawn up and the thighs and legs flexed. (The patient lies flat on the back). The "identical" or "contralateral" reflex is the eliciting of Kernig's sign in one lower extremity causes a reflex flexion of the thigh on the opposite side of the body. The absence of eruptions are not against C. S. meningitis—according to J. L. Morse, eruptions are far more often absent than present in this disease in childhood. The taches cerebrales are of no importance in the diagnosis of meningitis as they are present in other conditions in childhood. In some cases, however, this is quite marked.

Diagnosis—Tuberculosis meningitis, according to A. Jacobi, frequently has its origin in tuberculous bronchial lymph glands, and is most common in children between two and three and seven and eight years of age. There are usually three stages—namely, the stages of cerebral excitement, the transitional stage, and the third or paralytic stage. Choroidal tubercles may be detected in the eye (though rare), and the MacEwen sign is a hollow note on percussing over the inferior frontal or parietal bone, an indication of fluid in the ventricle. Leucocytosis more often absent, or a leukopenia may be present. A leukopenia is consistent with tuberculous meningitis, but not with other types.

There may be tuberculosis elsewhere, such as in the lungs, etc. The typical night crying or hydrocephalic cry in children. The positive Ninhydrin reaction in the spinal fluid, aids in differentiatng ths disease from typhoid fever, pneumonia, and digestive disturbances in children.

R. C. Cabot makes the statement that tuberculous meningitis is not an absolutely fatal disease. Perhaps one case in four or five hundred recovers. "In every case we can truthfully say to the family that there is hope and that recovery is possible." The cerebrospinal fluid shows a lymphcytosis, the small lymphocytes being in the majority. Tapping the muscles with a percussion hammer often brings out clearly defined swellings at point of irritation which last for a few seconds and disappear ("myoidemas")—and are a certain indication of wasting of muscle. These are commonly very marked in tuberculous meningitis, but may be present in other general conditions. Cerebration may be normal until near the end. The tongue si very dry—indicating severe degree of toxemia (except in mouth breathers).

Meningismus, or "serous" meningitis, may occur in typhoid fever, uremia, pneumonia, and gastrointestinal disturbances with acute meningeal irritation with hyper-production of cerebro-spinal fluid of practically normal constitution. In meningismus, there is stiffness of moderate degree usually, and without retraction except in children. Kernig's sign is usually present, but not always and the reflexes are apt to be more active than normal. **In meningismus**, the cells in C. S. fluid are not very numerous and practically all lymphocytes. In **tuberculous meningitis** the cell count is not so high as in the other purulent forms of meningitis, and mostly lymphocytes. But in children while sometimes we get a high cell count, it is true that mononuclear cells usually predominate, but at times polymorphonuclears are in the majority. To decide, one must examine spinal fluid for tubercle bacilli, and even animal inoculations may be resorted to. In the other forms of meningitis, the C. S. fluid is distinctly cloudy and runs freely under increased pressure. Examination shows a high cell count and both polynuclears and mononuclears are increased, the polynuclears being in the majority. The Noguchi protein test is positive. Fehling's solution is reduced. Sterile cultures and negative smears may at first be the results of C. S. fluid examinations, but if persisted in, the organisms may finally be found. After a week or two it is often impossible to find micro-organisms in the spinal fluid and the process may become a low grade inflammation with serous exudate and little cellular reaction. When in doubt, it is always a good plan to give the antimeningococcic serum. Be that as it may—any case with delirium, unequal pupils, Kernig's sign, stiff neck and leucocytosis demands lumbar puncture. If the C. S.

fluid is very cloudy you rarely find the meningococcus on staining a smear in true cerebrospinal fever. You may, of course, have a strepto- or a staphylococcemia, that is a septicemia of pyogenic origin with a meningo-coccal meningitis and one may therefore first find the staphylococcus or streptococcus organism and not until later the meningococcus. It is, therefore, a good plan to give the Flexner serium at once. Osteomyelitis, bad tonsils, or other foci of infection may exist. Staphylococcus aureus frequently produces osteomyelitis and secondary or pyemic abscesses often follow; however, staphylococcus very rarely localizes on heart valves and rarely attacks the meninges. The chances of recovery are greater in staphylococcal than in streptococcal acute purulent lepto-meningitis, but the prospect of recovery from either is small. In meningismus of uremia, there would be hypertension, hyperpnoea, increased urea, creatin and creatinin in the blood, albumin and casts, and the CO_2 combining power of the blood and other blood chemical tests could enable one to rule out uremia.

Typhoid Fever—Headache quite severe, but is not usually occipital and does not last all through the course of the disease. Backache and pain along cervical spine are not prominent symptoms. The splenic enlargement, the rose spots, typhoid bacilli in blood cultures, Widal reaction, leukopenia, dicrotic pulse, the urochromogen urine test, or Ehrlich's diazo-reaction and the temperature chart—all help towards the diagnosis of typhoid fever. The intolerance of light and sound, the marked hyperesthesia, exaggerated reflexes, peevishness and restlessness of meningitis are absent in typhoid fever. The pulse is alo slow, in proportion to fever in meningitis, but is not dicrotic as in typhoid. The diazo-reaction (urine) in any disease s a bad prognostic sign, its absence in a febrile case argues against typhoid fever.

Meningo-myelitis is the commonest form that syphilis takes in the central nervous system; and therefore, this condition, when more or less acute, must be ruled out. This is also a surface infection of the spinal cord and brain—the original infection occurring in the membrane covering the nerve tissue and the pia arachnoid.

The Wassermann spinal fluid and blood tests, the history of the case, and the therapeutic tests are measures that help to differentiate this condition , with the study of the cerebrospinal fluid, bacteriological and cytological results. "Xanthochromia and massibe coagulation" or the "syndrome of Froin" would be absent. It is not present usually in the cerebrospinal fluid of acute meningitis cases. It is due to pressure and localized stasis of the fluid along the spinal meninges; there is a great excess of protein and spontaneous ocagulation of the cerebro-spinal fluid in the test tube, with slight or no increase of cells; most often seen in cases of spinal tumor and inflammations and reactions following injuries to spine, etc. However, it must be remembered that in all instances of acute inflammation of the meninges the protein is increased (a mixture of globulin and albumin) in the cerebrospinal fluid. The total quantity normally is about 0.02 to 0.03 per cent. or 0.2 to 0.3 gram per 1,000 c. c., of spinal fluid. A decrease in dextrose in the C. S. fluid occurs in the acute meningitides. Normally, there is 0.048 to 0.058 per cent, or 0.48 to 0.58 gram per 1,000 c. c. of spinal fluid.

Next to "Xanthochromia," the largest amounts of protein are to be found in surface infections of the meninges as the meningitides, due to meningcoccus, pneumococcus, streptococcus, tubercle bacillus, and influenza bacillus. In **Acute Anterior Poliomyelitis** the inflammation is primarily an interstitial meningitis rather than a surface infection and, therefore, do not usually find a large amount of protein in the C. S. fluid. The Pandy and Noguchi or Kaplan tests ore the Mayerhofer "permanganate reduction index", test may be used for the estimation of the protein content.

Malaria—The enlarged spleen, the history of chills, the malarial plasmodium in the blood, the leukopenia would suggest malaria. Softening and enlargement of the spleen generally indicate only, that some acute infection is present.

L. F. Barker states: When a diagnosis is not clear in a patient with a high temperature, a blood culture should always be made. In the first week of typhoid fever a blood culture is positive in 90 per cent. of the cases. The same is true in lobar pneumonia. You can grow the pneumococcus from the blood within 20 to 24 hours in a large proportion of pneumonia cases. In acute meningitis you may get in a blood culture the meningococcus—or some one of the other organisms—staphylococci, streptococci, etc., that cause the disease—in one-third of the meningitis cases within 24 hours. This point deserves to be especially emphasized, i. e., to take blood cultures early in fe-

ver cases. Bilebouillon or blood-agar is also a good medium for spinal fluid culture in suspected cases of meningitis. Barker states, herpes is very common accompaniment of meningococcal meningitis—more frequently than in malaria.

In the differential diagnosis of the various forms of meningitis and such diseases as have already been mentioned, namely, malaria, typhoid fever, meningismus, uremia, and meningomyelitis, we must also include acute anterior poliomyelitis, especially the cerebral or meningeal form known as Heine-Medin Disease and finally Sinus Thrombosis, and Lethargic Encephalitis.

Sinus thrombosis, extending to the meninges, with high fever and high cell count, could be ruled out by the absence of dilation of the cranial or facial veins, no swellings of eyelids, no cyanosis of orbital or frontal regions, no protrusions of eye-balls, no engorgement of retinal veins, no mastoid signs; no otitis media, and nothing abnormal palpable in the jugulars. Brain abscess and acute encephalitis extending to the meninges can also be ruled out.

Heine-Medin Disease, or the meningeal form of poliomyelitis anterior acuta. In these cases a meningitis may be caused by the localization of the infantile paralysis virus. Netter believes this type frequent in France, and may be mistaken for cerebro-spinal meningitis. The symptoms of Heine-Medin disease include vomiting sometimes for 48 hours, followed by rigidity of the neck with flexion of the head. The patient may be soporous. Ankle jerks, diminished. MacEwen's, Brudzinski's and Kernig's sign may be present. These symptoms and signs point to meningeal irritation and may be due to cerebrospinal meningitis or other forms of pyogenic lepto-meningitis, tuberculous meningitis, the meningeal form of poliomyelitis or simply to a meningismus. The diagnosis must be based chiefly on blood culture and spinal fluid examinations and tests.

Josephine Neal, in October, 1916, before the New York Academy of Medicine, dwelt in detail on this subject. She stated that in the early stages of poliomyelitis the C. S. fluid is clear, except in a few rare instances in which it is very slightly cloudy. It often shows a good fibrin-web formation. There is a slight or moderate increase of albumin and globulin, together with a prompt reduction of Fehling's solution. The cell count is increased and as a rule 80 per cent. or even more of the cells are mononuclears, occasionally the polynuclears predominate where the fluid is slightly cloudy. There are certain large mononuclear cells present in poliomyelitis fluid which are more or less diagnostic.

In the early stages of ordinary meningitis the fluid shows varying degrees of cloudiness. The increase in globulin and albumin is usually greater than that which occurs in poliomyelitis and there is a poorer reduction of Fehling's solution. Finally, the cells in spinal fluid of purulent meningitis are largely polymorphonuclears and the meningococcus can usually be found on careful repeated search, but in some mild cases can never be found. In meningitis due to other organisms, you can practically always find them sooner or later in stained smears of the centrifuged specimen and in cultures of the spinal fluid. Netter attaches importance to complete loss of knee-jerks at a very early stage in poliomyelitis and to the presence of severe pain and tenderness in the limbs—which he says is especially marked in the meningeal type of the disease. Neal says that in some of these cases of poliomyelitis, the spinal fluid can only be differentiated from tuberculous meningitis, by means of animal inoculations. Paralysis, in due time, in the second or third week at most even if limited only to ocular or facial domain, occurs—and probably also in one or more of the extremities.

A monkey could be inoculated with some of the cerebro-spinal fluid and see if the animal develops Heine-Medin disease. Before discussing the prognosis and treatment of meningitis, it is essential to have some clear knowledge as to the cerebrospinal fluid itself, and the effects of lumbar puncture. Normally, the cerebrospinal fluid is for the most part a secretory product of the choroid plexus. Some may also be derived from blood vessels of the nervous tissues and probably also from the pituitary and pineal glands (John A. Kolmer). The choroid plexus is the main guardian against infection of the tissues of the cerebrospinal system, although its defensive powers are easily disturbed. Flexner and Amoss have shown that the intraspinal injection of sterile horse-serum or even simple spinal puncture, accompanied by some loss of blood, were sufficient to greatly reduce the resistance of the tissues to infection with poliomyelitis virus.

Kolmer says, lumbar puncture alone may so disturb the choroid plexus or other mechanism of defence of these tissues against infection as to favor infection of

certain micro parasites in the blood. Aseptic conditions and a suitable needle are of first importance. The pain produced during puncture can be prevented by preliminary infiltration of the tissues, along the passage the needle is to take, with 0.5 to 1 c. c. of a sterile 1 per cent. solution Eucain. Avoid undue force. Arching of the back widens the intervertebral spaces. After the puncture have the patient rest in the prone position for an hour or two, to avoid headache and vomiting.

The pressure of the C. S. fluid varies directly with the pressure of the venous sinuses, and it oscillates with coughing, forced respiration, crying and muscular movements. The pressure is four or five times higher when the patient is sitting up than when in the prone position on the left side. In children, according to Quincke, the normal and pathologic C. S. pressure is about one-third less than in adults. Kolmer recommends the use of the mercury manometer and the Landon technic, with the adult patient on the left side and quiet; the normal varies from 6 to 10 mm. of mercury; average 8 mm.; 12-20 mm. Hg. or higher are pathologic. Pressure is increased in acute and chronic, especially acute, forms of meningitis due to tuberculosis, meningococcal infection or poliomyelitis virus.

A marked decrease in the dextrose content of C. S. fluid occurs in the acute infectious meningitides—in meningococcus meningitis, the fluid may even fail altogether to reduce Fehling's solution. In acute meningeal congestion or simple "serous meningitis" or meningismus, the amount of dextrose is usually unchanged. In the acute suppurative meningitis cases the increase numbers of bacteria and the large number of cellular products of inflammation, the red and white blood corpuscles, consume or absorb a portion of the dextrose. Fehling's or Bang's micro method may be used for the dextrose estimation.

Chloride—Normally there is present 0.750 per cent. sodium chloride in C. S. fluid. There is a marked reduction of chloride in tuberculous meningitis, to 0.5 per cent. and in acute purulent meningitis to tuberculous meningitis, to 0.5 and in acute purulent meningitis to 0.6 per cent. In subacute or chronic meningitis the reduction is much less.

Cytology—Normally the C. S. fluid contains a very few cells, the number varying from 0 to 8 per cubic millimeter of undiluted fluid; 15 cells is a definite increase or "pleocytosis"—these are usually small lymphocytes. The number as stated above, are greatly increased in infective meningitides. The Fuchs-Rosenthal counting chamber is usually recommended, for counting the cells.

The **Weil-Kafka Hemolysin** reaction is based upon the fact that in suppurative meningitis the disintegration of leucocytes furnishes various substances of a bacteriolytic nature; and complements may be present; also, that in cases of acute meningeal involvement, there occurs a greater transudation of serum or a hypersecretion of the fluid, and a decrease of selective infiltration with the result that antibodies are more readily transferred from the blood to the cerebrospinal fluid; and therefore, we find an increase in the anti-sheep hemolysin in the C. S. fluid and in meningitis this is present. Over 90 per cent. of individuals show natural anti-sheep hemolysin present in the blood, none in the normal cerebrospinal fluid.

Meningitis may exist without temperature or leucocytosis, and would have to be differentiated from **hysteria**, but cannot be diagnosed unless headache, changes in cerebrospinal fluid, eye symptoms, ptosis, squint, etc., and retraction of the neck are present (R. C. Cabot).

Stained Blood Films.—In the A. M. A. Journal of December 21, 1918, p. 2048-2050,, W. W. King, describes the history of a case of cerebro-spinal meningitis, in which the early diagnosis was made by the examination of stained blood films. A slide was st ained with Leishman's stain. A second slide was stained by the Gram method controlled by the simultaneous staining of a known gram-positive coccus, and the diplococci in the blood film were seen to be gram-negative. Bloor cultures were negative blood obtained postmortem.

Prognosis and Treatment.

Prognosis—Based on folowing signs of improvement after serum treatment:

1. Improvement in consciousness of patient; 2. Fall in temperature to nearly normal; 3. Diminution in intensity of headache; 4. No decrease, or marked increase in pulse rate; 5. No increase in the rigidity of the neck; 6. Decrease in the globulin content of C. S. fluid. Many young infants do not respond to serum treatment as well as older children and adults. C. S. meningitis is more fatal in adults than in children. Netter and L. F. Barker believe that anti-meningococcic serum should always be used when there is any suspicion of meningococcus meningitis, without waiting for a positive diagnosis based upon bacteriologic study of the fluid obtained by lumbar puncture,

According to Osler, meningococcic meningitis is the only form of meningitis in which recovery takes place after treatment in 50 to 75 per cent. of cases. Tuberculous meningitis is practically hopeless. The repeated removal of the fluid from the spinal canal and the consequent decrease of pressure is beneficial. The serum (sterile horse serum or Flexner's serum), may be used in the hope that a mistake has been made in the diagnosis as to the form of meningitis or the urotropin in saline solution may be tried intraspinally. John Lovett oMrse regards these cases as absolutely hopeless.

Prophylaxis—The isolation of cases is recommended, especially in camps or other places where many men are brought together. The isolation and proper treatment of meningococci "carriers": Disinfection of the masopharynx, swabbing out the upper ari passages with various mild antiseptic solutions, Liquor Thymolis Comp. or Argyrol, etc. Sophian and Black state that the injection of dead meningococci (vaccine) may confer considerable immunity.

In the A. M. A. J., page 76, January 12, 1918, Vol. 70.2, Geo. H. Weaver, of Chicago, advises the use of a face mask as of great protective value in the prophylaxis of meningitis, influenza pneumonia and diphtheria. He suggests that the gauze mask be used by physicians, nurses, orderlies, etc., and both in hospitals, camps and households.

It is advisable to wear a properly-made gauze face-mask—one which would also prevent infection through the eyes (lacrimation, etc., carrying infection into the nose). This eye, nose and mouth protector is a useful precaution in influenza, pneumonia and meningitis, etc.

In an article on "Meningitis at Camp Greene," contributed by Capt. Paul G. Woolley, to the Journal of Laboratory and Clinical Medicine for April, the statement is made that "In the only organization which made use of systematic nasal sprays since the first of the year, not a single case (of meningitis) developed, and also that in those organizations in which sprays were resorted to after the appearance of the disease no other cases appeared." The spray used at this camp was Dichloramine-T. Virtually, the same method of treatment was employed by Major Cary P. McCord, Major Alfred Friedlander and Capt. Robert C. Walker, at Camp Sherman, in the treatment of diphtheria and meningitis, in an article published in the July 27th issue of The Journal of American Medical Association, in which they state that in the treatment of these carriers they inaugurated the use of chlorazene. They employed "an aqueous solution of .025 per cent. strength, administered as a gargle three or four times daily. In certain cases, the application was made by throat specialists to insure the reaching of remote points in the nasopharynx. The gargling was followed with an oily spray of Dichloramine-T of 2 per cent. strength. The combined use of aqueous chlorazene solution and the oil solution of Dichloramine-T promises to be of utmost value not only in preventing diphtheria and meningitis, but also as a prophylactic in pneumonia, measles, streptococcic sore throat and the other diseases originating in the nasopharyngeal tract—influenza, etc.

Medicinal Treatment—Bromides may be given for insomnia and delirium either by mouth or rectum, chloral may be added; dial (Ciba) or barbital may be used; or caffein if stimulation is necessary. Strychnine should not be used. Whiskey or brandy may at times be of value, as an aid to nutrition. Ergot and iodides are of no value in cerebrospinal meningitis; helmitol or hexamethylenamine may be used—even given intraspinally, especially in the fatal forms of C. S. meningitis for which no specific therapy has yet been found, as the tuberculous, pneumococcus and streptococcus forms and in those epidemic forms "resistant" to serum therapy. When pain is severe morphine or heroin may be used—fairly large doses are required. However, if pain can be controlled in any other way, it is better to avoid the use of morphine, as some of these patients are extremely sensitive to the depressing action of morphine. In very resistant cases and if the patient's condition is very serious, the cerebral ventricle should be tapped after trephining the skull and the serum should be injected into the ventricles. This can be done much more easily in infants and young children as a last resort. In tuberculous meningitis there is no specific therapy. It is the most frequent of all the bacteriological types of C. S. meningitis and is usually regarded as an absolutely hopelessly fatal disease. Frequent repeated lumbar puncture is the only hope. Lumbar puncture is made usually between the third and fourth lumbar vertebrae, "one-half inch to the right of median line," and the needle is directed slightly inward and upward. The needle should enter the spinal canal at a depth of 2 or 3 cm. in children and 4 to 6 cm. in

adults. Charles H. Dunn recommends lumbar puncture immediately in every case in which epidemic meningitis cannot be excluded.

It must be remembered that anti-meningitis serum is a specific immune serum, and is only of value in that form of cerebrospinal meningitis caused by the Weichselbaum Diplococcus, and is of no value in any of the other forms of C. S. meningitis. It is of no value when given by the subcutaneous route. Of late, some men have been using the serum intravenously exclusively, or alternately intraspinally and intravenously in daily injections. The earlier in the course of the disease the serum is administered the better are the prospects of success. Anti-streptococcic, anti-pneumococcic and anti-influenzal serum can now be obtained for use in the forms of meningitis due to these specific organisms. Staphylococcic meningitis may be treated by vaccine therapy. An autogeneous or homologous vaccine is preferable, but if not obtainable a stock vaccine can be used. Dunn recommends the daily injections of serum as long as diplococci can be found in the C. S. fluid. The amount of spinal fluid withdrawn should always be somewhat more (5-10 c. c.) than the amount of serum injected. The average dose for an adult is 30 c. c., but in very severe cases from which the fluid escapes readily, as much as 60 c. c. may be given. Usually given once in 24 hours until temperature is normal and the fluid practically clear. In severe cases can be given every 12 hours.

Dr. Niles, of New York, emphasizes the importance of keeping a high concentration of the serum continuously in the subarachnoid space. The average case requires four to six does—some cases require many more. The number of cells in the spinal fluid is often increased after the first injection of the serum, because of the irritation of the meninges by the horse serum. It is only transitory and the fluid gradually clears. In cases where there is a bacteria, 50 c. c. of serum is best given also intravenously. Dunn states that the persistence of Kernig's sign, rigidity and tenderness of neck, retraction of head or abnormalities of reflexes, in favorable cases is not serious and in itself does not indicate further injections. If after 4 or 5 injections there is still some fever and the persistence of headache hyperesthesia, and any affection of consciousness—as delirium or apathy—the injection of serum had better be continued. Four injections, even in mild cases, are usually recommended and should the diplococcus reappear in the spinal fluid (after having once disappeared with improvement, at any time while under treatment) another course of 4 injections should be given. McKenzie and Martin have introduced the use of an autogenous serum. They withdraw the blood serum of a patient suffering from meningitis and inject it into the spinal canal of the same or another patient. This is an active bacteriacidal fluid. G. Marchetti (Rivista Critica di Clinica Medica, Florence) recommends and has tried in eleven cases the injection of the anti-meningitis serum one day by vein, the next intraspinally and he continued the injections in this way. All the cases recovered, with the exception of one death. This case was complicated with malaria and was very weak.

W. W. Herrick (A. M. A. J., Aug. 24, 1918), at Camp Jackson, recommends the intravenous route for serum treatment. He gives from four to eight massive injections by vein, of from 80 to 150 c. c. during the acute stage in a period from two to four days. Desensitization by subcutaneous injection of 1 c. c. of serum one hour before the introduction of serum into the vein and the cautious injection of the first 15 c. c. at the rate of 1 c. c. c per minute. If dyspnoea, cyanosis, pallor, vomiting, irregular pulse appear, stop the injection. He concludes that the average case requires 400 to 600 c. c. of serum by vein and about 100 c. c. by spine. 265 cases were treated and studied. Blood culture was positive in one-third of the cases, showing there was a true septicemia or meningococcemia in a large number of the cases. Four per cent. of meningococcus—blood, infection have not shown meningitis and the serum, intravenously, rendered the blood sterile. If meningococcus meningitis is a metastatic or secondary local infection and inflammatory focus, the primary stages of the disease, the sepsis, or bacteremia, should be recognized and treated. With the combined intravenous and intraspinal treatment, the meningococci are not found in the spinal fluid after the first 48 hours! In 1904-5, epidemic, the mortality in New York City was 70 per cent. Paralyses, defective sight and hearing or mental impairment often followed as a sequel. Since the serum has become the main treatment, the mortality is only 18-25 per cent. In cases showing a tendency to become chronic, autogenous vaccines are given in all cases by the New York Department of Health.

E. M. Medlar, A. M. A. J., February

16, 1918, 458, at Camp McClellan, concludes and agrees with Major Herrick that epidemic cerebro-spinal meningitis is not primarily a meningitis, and that all meningitis, exclusive of traumatic meningitis and brain abscess, is secondary to hematogenous infection. It is probable that if seen early enough, all cases of meningococcic meningitis would give positive blood cultures.

Herrick, A. M. A. J., January 25, 1918, emphasizes the fact that epidemic meningitis is primarily a generalized systemic invasion by the meningococcus—a sepsis —with possible secondary involvement of the meninges, joints, endocardium, pleura, tonsils, etc. iDagnosis in the stage of meningococcic sepsis may be made many hours before the meningococcus has time to develop its characteristic selective action on the meninges. In this stage of sepsis, before meningitis develops, it is important to administer intravenously anti-meningococcic serum in doses of 30 to 60 c. c. every 24 hours during first 3 or 4 days, and then if meningitis symptoms set in, the intraspinal injections should also be used. Dangers of intraspinal injections are: (1) Anaphylactic shocks, this can be avoided by giving a sensitizing dose subcutaneously before proceeding with the intraspinal injection; (2) Cardiac or respiratory symptoms may develop during the inection, if so, stop, and drain off a few c. c. of serum. Artificial respiration and circulatory stimulants may be used. This accident is rare if serum is administered by gravity, which is the method recommended. A polyvalent serum and one of high potency should be employed. The New York Department of Health makes its own.

In the American Journal of Medical Sciences for July, 1918, McConnell, Morris and Seehorn at Camp Pike, Ark., report the results of their study of thirty cases of meningococcic cerebro-spinal meningitis (A. M. A. J., p. 598, August 17, 1918). The order of frequency of symptoms were:

(1) Profound frontal headache: (2) Stupor or coma; (3) Rigidity of neck; (4) Vomiting—was projectile or cerebral in type coming without previous nausea and without warning; (5) Kernig's sign; (6) Increased knee-jerks; (7) Hyperesthesia; (8) Slow pulse; (9) Petechiae; (10) Slight increase in temerature.

Strabismus was not present as an early symptom: the headache was very severe in character, much more marked than in typhoid and nearly always was frontal; Kernig's yas * in nearly every case; knee-jerks were exaggerated in most of the cases, as were the plantar reflexes; Babinski's sign was absent; hyperesthesia was marked and at times a "tache cerebrale"; the pulse in nearly every case was slow, 60-79 or less; herpes was a common symptom—present in practically all of the cases, usually most extensive on the lips at the mucocutaneous junction. The gravity method was not employed by these men at Camp Pike. Instead, a Luer syringe of 40 c. c. capacity was used, with rubber tubing for connection with the syringe and needle. The serum was injected very slowly. Doses of 40 c. c. were usually given at 24 hour intervals. Adrenalin solution or Epinephrin may also be used in conjunction with the desensitizing subcutaneous injection of serum prior to intraspinal or intravenous serum injection.

Injection of Oxygen or Air—Remond and Francois (in Bulletins de la Societe Medicale des Hopitaux, Paris, October 20, 1917) state that tuberculosis is essentially curable, especially when it involves serous membranes. The injection of air has been found useful in tuberculous pleurisy and peritonitis and Ramond has found it effectual also in arthritis, orchitis and meningitis. After 40 c. c. of C. S. fluid is removed by lumbar puncture, patient reclining, the air is drawn into a Roux syringe through a long, red-hot platinum needle. This sterilizes and warms the air, and it is then slowly injected through the puncture needle which has been left in place. The amount of air injected should not be over one-half or two-thirds of the amount of fluid withdrawn. The injection of air can be repeated for 5 or 6 consecutive days or oxygen may be used for longer periods. Air or oxygen may even be injected into the lateral ventricles.

Injections of iodoform emulsion intraspinally may be tried. The C. S. fluid is alkaline, and the intrathecal injection of solutions of urotropin may not act, because urotropin requires a distinctly acid medium for its action.

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German Health Resorts.—The thermal and climatic stations of Germany and Austria before the war enjoyed an income of about 900,000,000 francs, while those of France received not much more than one-fourth of this huge sum. After the war the foreigner will visit France in preference to the Teutonic countries as a matter of sentiment and the French health resorts will have an unprecedented boom. The French statesmen look forward to this source of revenue as one of the principal ways of rehabilitating their country's prosperity.—La Presse Medicale.

PROHIBITION AS A PROBLEM.

By Edwin F. Bowers, M. D., Author of "Alcohol; Its Influence on Mind and Body," Etc. New York City.

Alcohol is the ailment of probably one-third of all the sick people in the civilized world today. In this country our sanitariums, hospitals, and insane asylums are crowded with victims of alcoholic tolerance, alcoholic abnormality, and alcoholic degeneration. In private practice the number of cases directly resulting from, or complicated by, alcohol, runs into the scores of thousands.

And while alcoholism is by no means so fatal a condition as tuberculosis, yet, inasmuch as there are probably forty alcoholics to every consumptive in the United States, the death-rate from alcohol must be a perpetual source of joy to the undertaker.

This, by way of preamble, to establish what should be self-evident: that alcohol creates a physical, mental and moral depreciation, and that the alcohol addict is a sick man.

Now, one of the grim things about this alcoholic sickness is that it generates an overpowering craving for the thing that causes the sickness. This terrible craving—this racking of soul on the Procrustian bed of booze—can be palliated by only one thing—a little hair from the dog that bit it first.

It is no use trying to placate the craving with substitutes that are "just as good." There isn't anything "just as good" as alcohol for an alcoholic—except something that may be much worse—the effects of which may be even more degrading and soul-and-body-destroying than are the effects of alcohol. And this is the theme of our story.

In our wisdom we have seen fit to banish booze. After July 1st, the United States is going to clamber up on the front seat of the water-wagon, gather up the official reins, and call out "Giddap!" in stentorian tones.

We shall be on our way. Not one in a hundred of us will know where he is going, or whether he'll get there, or what will happen if he does get there. And yet the proper answer to these questions may mean life, and even reason itself—much more important than life—to scores of thousands.

For we are suddenly depriving habitues of necessary stimulants—something which should never be done with any chronic case of alcoholism without having first made provision to unpoison it of the

condition which makes these stimulants necessary.

The result will be a stampede for substitutes. Hair tonics, flavoring extracts, shoe blacking, patent medicines in an alcoholic menstrum—anything and everything that smells or tastes like alcohol—will be poured into the systems of addicts.

Kerosene and gasolene cocktails will achieve an ever-increasing sphere of favor. Varnish, turpentine, and the deadly wood-alcohol will furnish their quota of victims. Blind tigers, boot-leggers, and illicit stills will wax obese. Drug stores will reap a golden harvest from putting up "prescriptions" for intoxicants.

But, most dangerous and most far-reaching of all, the use of health-destroying and habit-forming narcotics will increase beyond anything ever dreamed of in the palmy days of alcohol.

For under the present Federal laws the druggist is permitted to put up and to dispense any preparation he may see fit to sell,(so long as these come within the very lax and lenient minimum dosage scale—which is a very liberal dosage indeed—permitted by the Federal Narcotic Law.

He is permitted to use certain minimum quantities of habit-forming drugs without making any accounting to the Government for these. He is at liberty to sell, without legal restriction, combinations containing habit-forming narcotics, which, if used for a long enough period of time, are quite as certain to establish a drug tolerance and a drug craving as though they had been taken "straight."

For it is not the quantity of the drug taken that creates the craving for more of the same. It is the nervous and organic reaction to the drug itself, plus the regularity of its administration, that starts the conflagration.

And remember, also, that combining the opiate with pretty pink syrup, or with other ostensible "remedies," does not destroy the physical action of the narcotic. All the powerful potentialities for evil—for physical, mental and moral shipwreck—are present in these nostrums.

Some idea of the dangers from these may be gained from the experience of the late Dr. Ashbel P. Grinnell, for seventeen years Dean of the Vermont Medical College. After the adoption of prohibitory legislation in Vermont, Dr. Grinnell sent out to all wholesale and retail drug stores, general stores, and groceries that carried drugs as a part of their equipment, a letter of inquiry concerning the sale of habit-forming drugs.

Such was the personal standing of Dr. Grinnell in Vermont that he received replies from all but two or three of those addressed. These replies indicated that sales of habit-forming drugs had increased so rapidly following the arid wave, that at the time of inquiry, there was a daily consumption of opium and its alkaloids—morphine, heroin and codeine—equal to one and one-half grains for every man, woman and child in Vermont.

This alarming increase was attributed solely to the prohibition of the use of liquor. Dr. Grinnell concluded that the attempt to enforce abstinence upon the man who wants to drink is not only ineffective, but actually destructive. And that while society may save itself from a few drunkards by prohibition, it is more than likely to get a disproportionate number of lunatics and drug-fiends to take their places.

In the South, where State prohibition has been enforced for a number of years —against the negro and the "poor white" anyhow—matters are in even a worse shape, as every traveler knows.

Unable to obtain alcoholic surcease from real or imagined ills, these victims of the "take-something" habit have gravitated to cocaine and heroin—which they seem to be able to obtain in almost unlimited amounts.

So that now, in North Carolina, for every eighty-four patients admitted to the State insane asylums, one is a drug-addict. In Georgia, one in forty-two is afflicted with drug-disease. While in one Mississippi hospital, out of every twenty-three patients, one is a slave to cocaine.

It works 'tother way around with equal facility. In India and China, following the forced reduction in the consumption of opium, there has been a correspondingly marked increase in the use of alcohol.

Now, this is a condition, not a fanciful theory. It is a condition not confined to any race or to any form of civilization. Nor does the character and quality of the "dope" matter so much as does its availability.

Almost it might be said that narcotic addiction is a pervading human impulse. So, if we do not want to cause death, insanity, and millions of hours of needless suffering, we must be prepared to reckon with this impelling impulse.

This does not mean that prohibition in itself is an evil. Indeed, the prohibition of the manufacture and sale of alcohol for beverage purposes is perhaps one of the

greatest benefits ever forced upon an unappreciative populace. Many distillers and liquor dealers themselves admit this.

But prohibition of alcoholic beverages alone is not enough. There must also be prohibition of the sale of poisons—poisons far more destructive in their influence than alcohol. Therefore, we must take a much broader view of the problem than we have thus far permitted ourselves to take.

For one thing, we must learn to regard the alcoholic as a sick man—not as a criminal or a degenerate. Indeed, most addicts are no more to be blamed for their condition than is a hunchback or a cretin.

It must not be understood from this that the narcotic addiction is inherited. Addiction is an acquired trait. No one is ever born with a taste for morphine, or hasheesh, or cocaine, or alcohol. This is an erroneous idea, harped on through all the ages, as an excuse for over-indulgence, and as an argument advanced by the excuser for not breaking the shackles of his habit.

Yet the fact remains that millions are born with weak, unstable mentality, and flabby will—prone to excess in everything except well-doing, and deficient in resistance to every form of temptation.

Their highly-strung nervous systems crave the abnormality which alcohol and drugs offer. They are sick. And we are doing nothing to cure them.

This is the crime of our social order against the drunkard. It is a crime intensified by our unwillingness to co-operate with the addict toward his own reclamation, and further intensified by our supine willingness to allow him to be poisoned by drugs infinitely worse in their effect than alcohol.

For what avails it to deprive a drinker of pale ale and leave him free to buy and consume any amount of paregoric? Where is the gain in prohibiting the sale of high-balls and encouraging the demand for heroin? And what use is it to restrict the consumption of beer and light wines —which are relatively harmless—and stimulate the doping with codeine and the snuffing of cocaine—habits infinitely more injurious?

Now, it is estimated by the Government that there are, in America, one and one-half million victims of habit-forming drugs, whose ranks are being added to at the rate of one hundred thousand new victims each year. This is a grave situation. For unless there is, at once, some provision made to restrict the sale of these habit-forming drugs, we might much better have kept our alcohol—as by far the lesser of two evils.

Therefore, laws should be passed without delay, forbidding the incorporating of any narcotic into anything that can be sold without a physician's prescription. And the Government itself should undertake the importation and distribution of every grain of narcotic that enters the country, making everyone who handles or dispenses each fraction of a grain account rigidly for its ultimate distribution and use.

And then we should make some intelligent effort to cope with drink and drug addicts. Under our present system the alcoholic is taken to Bellevue, or Kings County Hospital, or to any of the big State hospitals throughout the country, and treated as an "emergency case."

Usually the first thing done to him is to deprive him of booze. Then he has to take the deprivation consequences. If he is an old chronic, whose cells are saturated with long indulgence in the protoplasmic poison, alcohol, he stands an excellent chance of developing delirium tremens.

If he escapes dying, he may be more likely to develop an alcoholic "wet brain." This may mean alcoholic insanity. If he has money he may now become a patient at some private sanitarium for an indefinite period. If he is without money, he may board at some State hospital or asylum for the remainder of his life. For without definite medical care, a permanent cure of "wet brain" is almost in the miracle class.

Under our present antiquated methods there is no intelligent classification of cases. The treatment is hopelessly routine and uniformly "expectant." Little is done to rid the system of the accumulated toxins of alcohol excesses.

Outside of a few sweat-baths—which aren't a drop in the bucket of treatment necessary to rehabilitate an addict—no effort is made to scour his cells and glands clean of the element that makes them cry out for further narcotization. And but little attempt is made to build up the nervous system, and to increase the moral, physical and nervous resistance to alcoholic desire.

Hence it is that relatively few cases can be normalized and ultimately salvaged. And the saddest feature of the whole matter is that we—the great public—are absolutely indifferent whether they are or not.

Here are a few items of testimony to prove this. At the present time, in New

York City, there is not yet a public institution where a man, desiring to be freed of the craving for alcohol or drugs might go, either as a charity patient, or a "pay" patient. And no recognized charity makes any provision for medical treatment of the drunkard.

The one place in New York, set aside for special work in the reclamation of alcoholics, has been finally closed, as a failure. The neglect to use successful modern means of treatment, and the pitiful lack of knowledge, as to how to deal with this type of patient—both in a medical and in a sociological way—foredoomed the venture. And more's the pity!

However, we are still sending enormous sums of money to China—in many respects the most enlightened country on earth. This may help some of us to maintain our physical equanamity.

Only two States in the Union—Massachusetts and Iowa—maintain colonies for alcoholics—colonies where nerves and bodies may be built up by contact with Mother Earth, while poisoned systems are unpoisoned through natural elimination, and through the vivifying and toxin-consuming effects of oxygen.

This is a beginning. But it isn't enough. Nor is its scope sufficiently wide. For, in addition to segregation and healthful colonization, some definite medical treatment should be undertaken which would effectually cleanse the body of that perilous stuff that weighs so heavily upon the nerves and the brain.

There is only one scientific way to accomplish this. This is to establish, in every metropolitan centre, an institution devoted to the relief of drug and alcohol addiction. This hospital should be fitted out with the most modern and best approved methods of treating drug and alcohol victims.

Possibly the plan of treatment in use at the Towns Hospital, New York—first introduced to the Profession by Dr. Alexander Lambert, President-Elect of the American Medical Association—might be carried out on an elaborate scale.

This treatment, which also has the endorsement of Dr. Richard C. Cabot, and scores of able men throughout the country, is perhaps the most effective of all means of de-poisoning drunkards and narcotic addicts, and putting them in a physical and mental condition for keeping themselves de-poisoned.

Complete descriptions of this treatment have been published in the most prominent medical journals in the country. In fact, Dr. Lambert himself, in The Journal of the American Medical Association, was the first to give an account of it.

Following the medical treatment, there should be as there are in the Towns Hospital, courses of exercises, baths, electricity, and every variety of physical therapeutic measure calculated to put body and nerves in the best possible condition of health. Usually a week's treatment by this method frees the patient of his poisons, and also of his craving for more poison.

Institutions qualified to do this class of work should be established, without delay, in order to provide the alcoholic—soon to be deprived of his alcohol—with a certain means of recovery.

If such institutions were available everywhere throughout the country—organized possibly as Government units—more could be done to clean up the disease of drunkenness and prevent the impending increase in drug consumption than could be accomplished by all other agencies combined. If these retreats are not available by the time the country goes "bone dry," the prohibitionists will have to assume the responsibility for a very terrible state of affairs. Unless something is done—and done soon—there won't be mad-houses enough in the land in which to sequester those crazed by drugs, "dope" and drink.

Once upon a time the question was asked, "Am I my brother's keeper?" There is only one answer to this question. It shouldn't be hard to find it, if our hearts are in the right place.

Putting Vim in Chlorotic Girls.

In the case of the pasty-faced, apathetic girl or young woman, who is forever on the verge of a serious illness, for no other reason than lack of vitality and ordinary tissue resistance, cod liver oil, is the one therapeutic agent that should be chosen. But these patients cannot tolerate the plain oil by reason of its unpalatableness, and a pleasant preparation such as Cord. Ext. Ol. Morrhuae Comp. (Hagee) should be chosen.

Cord. Ext. Ol. Morrhuae Comp. (Hagee) contains every therapeutic and nutritional virtue of the plain oil, and as it is palatable and may be continued for long periods, it is the ideal agent for young women of the chlorotic type. It makes the blood-stream richer, adds to the powers of resistance and lifts them out of the near-invalid class. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is everything that plain cod liver oil is except dis agreeable.

THE BIOLOGICAL AND THERAPEUTIC ACTION AND THE CLINICAL VALUE OF RADIUM AND ROENTGEN RAYS.

By Henry Schmitz, A. M., M. D., F. A. C. S., Chicago, Illinois.

From April 1, 1914, to October 1, 1918, we treated 283 patients with either radium or the roentgen ray or with a combination of these two or a combination of radio-therapy and surgery. The cases were clinically divided as follows:

Uterine carcinomata: 148 of which 21 were operable, 87 inoperable and 40 recurrent cancers. Rectal carcinomata: 43 of which 5 were operable and 38 inoperable and recurrent. Genito-Urinary carcinomata: 32 of which 1 was operable and 31 inoperable and recurrent. Mammary carcinomata: 60 of which 13 were operable, 11 inoperable and 36 recurrent cancers. To these may be added 25 cases of bleeding myomata uteri; 50 cases of hemorrhagic myopathies; 8 cases of inflammatory myopathy; 1 of leukoplakia vulvae and 1 of kraurosis vulvae—a total of 85—making a grand total of 368 cases.

It is immediately seen that most of these diseases are usually surgically treated. If we decided to apply radium or roentgen rays we did so because either surgery could not benefit the patient any more, while the rays gave some hope of palliation, or the rays would increase the efficacy of surgical treatment, or actinotherapy proved to be superior to surgical methods of treatment.

To enable us to decide whether a patient should be subjected to radium or the roentgen treatment or a combination of these with surgery or to surgical methods only, we should endeavor to answer these questions:

1. What can surgery accomplish in the treatment of disease?

2. What therapeutic value have radium and roentgen rays in the treatment of disease?

3. Are there any differences in the action of radium and roentgen rays?

An anatomical cure of a malignant disease can only result from a complete eradication of all tumor elements from the body of the bearer. If the malignancy is confined or localized to an area which can be completely and safely removed by a surgical procedure, it must be thus treated. The malignant disease is said to be operable. If the patient survives a time-period of five years following the surgical treatment, and during this time has been free of any recurrence or metastasis, he is said to be cured. It is, unfortunately, only very rarely that we observe cancer in such a localized, well defined state, that is, in its incipiency.

If the malignant growth has invaded the surrounding or distant tissues and organs to such an extent that we cannot remove the disease with the knife and with safety to the patient, a cure by surgical measures is absolutely precluded. Contrary we cause an auto-dissemination of malignant cells which rapidly leads to either a carcinomatosis or we irritate the tumor and cause it to grow with a boundless velocity. The patient has not been benefited by such therapy but has been rendered much more miserable than he would have been if left alone. The cancer has become inoperable and therefore hopeless. The absolute operability of a cancer can be determined with difficulty only. In about nine out of ten cases the patient comes to the surgeon at a time when the disease is beyond his reach. These facts explain the discouraging results of surgery in almost all forms of malignant disease in the human race.

In answering the second question we must consider the biological action of the rays on normal and abnormal tissue and cells. This action depends on the technique used in the administration of the rays and the histological character of the cell in which they become absorbed.

The factors observed in the use of radium are (1) the amount and compactness of the radium element used; (2) the filtration employed; (3) the distance between the source of the radiation and the tumor; (4) the duration of the application; and (5) the time interval between subsequent applications. In the therapy of the roentgen ray we must observe (1) the source and the amount of the secondary current; (2) the size and kind of tube; (3) the hardness of tube; (4) distance of the anode from the tumor; (5) the time-period of duration of the application; and (6) the interval observed from one course of treatment to the next.

The effect of rays on living cells is both degenerative and destructive. The nearer the cells approach or remain in an undifferentiated, embryonal state, the more readily they undergo cytolysis or destruction. It does not matter whether the cells are normal or abnormal. This difference in the receptivity or sensitiveness of cells to the rays depends (1) on their age, both the momentary phase of the developmental period in which they happen to exist as well as the age of the host to whom they belong, and (2) on the his-

tologic species and the varieties in each one of these.

Cells which are in, or have not advanced far beyond, the embryonal and undifferentiated state as the basal cells of the skin and hair follicles, lymphoid cells, sex cells, as graafian follicles and spermatozoa, are destroyed by a dosage of rays which would excite only a simple reaction in the surrounding mature tissues. The tissues of a child are much more easily altered by the rays than the corresponding structures in an adult. Tumors composed of embryonal cells succumb to the action of the rays sooner than the surrounding adult tissue elements. The difference in receptivity is acknowledged to be about as seven or six to one. The more undeveloped the embryonal cells of a malignant tumor remain, the more rapidly will the cells proliferate and the more receptive will they be to the action of the rays from radioactive substances.

An impediment in the growth of the tumor occurs soon after the beginning of the treatment. It is due (1) to a serous infiltration occurring in the area exposed to the rays, an enlargement of the cell nucleus causing an increase in the size of each individual cell and an obliteration of the capillaries due to an increase in the size of the endothelial cells; (2) to a degeneration of the cell nucleus evidenced by cessation of mitosis, pyknosis, cytolysis and achromatism. These changes are of a traumatic nature and call forth an inflammatory reaction resulting in a lymphocyte and leukocyte infiltration, and a proliferation of the stroma. The latter is expressed by an enormous formation of young fibroblasts, which gradually develop into highly differentiated connective tissue cells and fibers. An excavation of portions of the tumor results. The spaces thus formed are filled by granulation and connective tissue which become covered by epithelium if degeneration occurred, or by scar tissue if necrosis took place.

The round cell infiltration and fibroblastic proliferation have still another signficance. Their phagocytic faculties are instrumental in removing the debris of the necrobiotic cell elements. We do not wish to advance the impression that a microscopic examination of scar tissues would show a total absence of all abnormal cell elements, on the contrary, abnormal cells are always demonstrable on microscopic examination, although they are in a state of degeneration shown by absence of mitosis and every known variety of karyolysis, cytolysis and achromatism. It is impossible to state whether these abnormal cells are dormant or whether they are absolutely harmless and dead. Prime,* in a recent publication, considers that these processes effect the cell nucleus in preventing further mitosis. Such radiumized tissue will not grow when inoculated in mice. Radium does not kill the cells outright, but injures the nucelus in such a manner as to prevent further division which must eventually result in the death of the cell if its energy is expended in growth and division and not in a purely mechanical function.

The histologic changes in other tumors or tissues are identically the same, namely, impediment in the proliferation of the pathologic cell element and its subsequent death, round cell and connective tissue infiltration and phagocytosis, and finally heavy cicatrix formation, which is poor in blood supply and often resulting in a hyaline degeneration and softening, or connective tissue regeneration. The latter becomes covered with epithelium richly supplied with capillaries, while the former remains without an epithelial surface covering, but possesses a heavy, grayish pseudomembrane.

The technique of roentgenotherapy has been developed to a very exact state, that of radium is in its infancy, therefore by no means as yet perfect. We are still at variance whether the radium salts or its emanation should be used, whether large or small amounts should be employed, whether the duration of the application should or should not avoid any visible injury to the tissues such as burns and necrosis, whether we should filter out the beta-rays or use both beta and gamma rays. Personally, I incline to the view that we must treat the disease and not the patient. The surgeon is most successful in the treatment of malignant diseases who is most radical, who dares to work far out into the healthy tissues. Consequently the farther reaching a degeneration or destruction of tissue is brought about by the rays, the better the remote results of radiotherapy must be. Lastly we must determine when to use radium rays and when roentgen rays. The therapeutic action of radium is confined to a radius of four centimeters, hence is purely local. That of the roentgen rays emanating from a correctly adjusted Coolidge tube is far more intense and much more diffuse. The therapeutic intensity of both can be multiplied by the crossfire method using as many portals

of entrance as practicable in a given region of the body. Painstaking thoroughness and an unerring system bespeak wonderful results. We use radium in the body cavities applying it directly into or against the tumor mass and in surface carcinomata when purely local action is desirable. In all other instances we prefer the roentgen ray.

The conclusions drawn from these statements may be briefly summarized as follows: Surgery removes diseased tissues and organs but cannot modify their pathological state. The gamma rays of radium element and the filtered roentgen rays can modify abnormal cells but cannot remove them. Therefore it is evident that a combination of these two methods of treatment would increase the efficacy of the one or other in many instances.

These are the viewpoints which we at present observe in the treatment of malignant or potentially malignant diseases. First, we ray with the combined gamma rays of radium and the hard filtered roentgen rays to degenerate the abnormal cells; secondly, we eradicate the diseased tissues and surrounding areas surgically if one can do so and by measures as radical as possible, and finally we again apply the combined radium and roentgen rays as thoroughly as permissible to destroy any diseased cells or cell nests that inadvertently may have been left behind after the surgical eradication.

Prior to April, 1914, we only used the roentgen rays either as a prophylactic following radical excision of disease, or as a palliative in inoperable cases. The results were very discouraging, excepting selected cases of myomata uteri, hemorrhagic myopathies and a few mammary carcinomata.

From April 1, 1914, to about April 1, 1915, we used radium rays either as a prophylactic after operations or as a palliative in inoperable disease. The primary results were very encouraging. We observed about 50 per cent. of local healing in inoperable carcinomata. However recurrences were the infallible rule. These occurred mostly in the parametrii and regional lymph glands.

Since April, 1915, we, therefore, used combined treatment of radium and roentgen rays, the former attacking the tumor locally and the latter acting on the surrounding tissues and organs and regional lymph glands.

We observed many cases of inoperable malignancy which were rendered entirely free of any palpatory abnormal findings. As early as April, 1914, we decided to subject quite a number of these cases to radical excision by surgical methods. We used the electric cautery forceps of Downe either vaginally or abdominally and then followed the operation by radiotherapy. We had many brilliant results. Finally we made it a rule to subject all cases of malignancy, whether operable, inoperable or border-line cases, to a preliminary treatment with radium and roentgen rays, followed by an operation if the local and constitutional condition warranted the procedure and then again radium and roentgen rays to preclude recurrences if possible. We are convinced that this plan forms the most ideal and advanced procedure of treatment in suitable cases.

The gross clinical results obtained in the more important of these diseases are as follows:

UTERINE CARCINOMATA:

	Living	Died x	Not Heard From	Total No.
Operable uterine carcinomata with pre- and post - operative raying	36 38-19 months	12-3 months	1	6
Operable carcinomata with postoperative raying only	44-43-8-7 -2 months	4-19-3-24 15-7-1 months x	3	15

Of cases treated both prior to and after operation 50 per cent. are living.

Of cases treated only after operation 33 per cent. are living.

The patients living have been recently examined and are free of any recurrence.

x Average duration of life in those who died is 11 months.

	Living	Died x	Not Heard From	Total No.
Inoperable uterine carcinomato with rays and operation	19 mo. with recurrence 15 mo. free of recurrence	9-3-31-5-5 8-7 11-18 mos.	2 died from septic peritonitis following operation	13

x Average duration of life in those who died is about 10 months.

	Living	Died x	Not Heard From	Total No.
Inoperable uterine carcinomata treated with rays only	1-3 Months 1-4 " 5-6 " 1-8 " 2-11 " 1-12 " 1-13 " 1-16 " 2-17 " 1-21 " 1-30 "	2 aftet 1 mo. 6 " 4 " 3 " 3 " 2 " 4 " 1 " 5 " 1 " 6 " 1 " 8 " 3 " 9 " 3 " 10 " 1 " 11 " 2 " 12 " 1 " 16 " 1 " 21 " 2 " 24 " 1 " 26 " 1 " 36 "	15 did not report 6 died from effects of treatment. 5 too early to report	
	17	31 x	26	74

x The average duration of life was a fraction over 9 months.

	Living	Died x	Not Heard From	Total No
Recurrent uterine carcinomato	24-24-15-4 4-4 2-mos.	10 5-6-9 6-9 15-5-8-3-15 19-15-6-6 6 4-9 6-mos.	9 did not report 5 died from operprocedure chiefly cepsis	
	7	19	14	40

x Average duration of life was 8 1-3 months.

RECTAL CARCINOMATA.

Operable		Inoperable			
Living	Died x	Living	Died z	Not Heard From	Total No.
33-13	12-26-16	24-22-18-15 13-8-6-4.4- 4-4-3-2-2	6-3-17-6-30 6-6-2-6-9-8 6-3-7-4	8 1 died after colostomy	
2	3	14	15	9	43

Percentage living after one year 20 per cent.

x Duration of life of those operable, 18 months.

z Duration of life of those inoperable, 7 1-2 months.

GENITO-URINARY CACINOMATA

Operable		Inoperable			
Living	Died	Living	Died	Not Heard From	Total No:
	3	16-36-27-18 -9-7-7-6-8-7 -4-4-5-3-5-2	5-2-6-6-8 6-2	4 2 died from uerthral fever and subsequent congestion of kidneys. 1 died from advanced carcinoma soon after beginning of treatment. 1 died from sepsis after cautery.	
	1	16	7	8	23

MAMMARY CARCINOMATA

Operable			Rceurrent			Inoperable		
Living	Died	No Report	Living	Died	No Report	Living	Died	No Rerort
32-22-20	1	1	34-21-17	46-9-3-9	4	21-7	6-2	1 shock
19-15-13			17-15-13	15-18-½		5-3		4
7-5-4-4-5			13-9-12	6-24-28-				
			9-4-11	3-4-16-				
				17-2-3-				
				11-9-9-1				
11	1	1	12	20	4	4	2	5

Operable mammary cancers living 11; died or no report 2; i.e., 85 per cent living.
Recurrent mammary cancers living 12; died or nó report 24, i.e., 33 plus per cent living.
Inoperable mammary cancers living 4; died or no report 7, i.e., 36 per cent living

The results obtained in the treatment of carcinomata are of course without any statistical value, as the time honored period of five years has not yet elapsed in a single instance. If we compare the results with purely surgical statistics as given by Reuben Peterson, John G. Clark, Howard Kelly, Kroenig, James F. Percy and Mayo amongst others, we may be permitted to regard the results as very encouraging and promising. They may not be as brilliant as those obtained by Kelly and Burnam in uterine carcinomata, or Janeway in cancers of the jaw, yet they compare favorably with those reported by John G. Clark, the London and Manchester Radium Institute and the Harvard University Cancer Commission. A perusal of our results in mammary cancers proves the obvious value of radiotherapy in operable as well as recurrent and inoperable cancers. The fact that the results in mammary cancers are better than in pelvic malignancy may be explained by the greater technical difficulties in diagnosis and surgical as well as ray treatment in the latter.

Eighty-five cases of benign diseases of the female genital organs were treated by actinotherapy. Fifty had a hemorrhage and eight an inflammatory myopathy, twenty-five myomata uteri, one a leukoplakia and one a kraurosis of the vulva. The indications for the ray treatment are the presence of an essential menorrhagia or an essential leucorrhea in the myopathies and uterine hemorrhages in the myomata which do not yield to medicinal treatment. Submucous pedunculated, cervical and degenerating myomata also, form a contraindication. The possibility of the presence of malignancy must be absolutely excluded before treatment is instituted. If in doubt radical excision must be practiced. Procrastination would be criminal. Amongst the hemorrhagic myopathies we had one recurrence, amongst the inflammatory myopathies three failures, and amongst the myomata two negative results. The leukoplakia vulvae yielded to the rays, while the kraurosis did not even improve.

In conclusion we feel justified to formulate the following principles:

1. Operable carcinomata should receive a preliminary application of radium and roentgen rays to cause a degeneration of the abnormal cells. Subsequent radical extirpation which preferably should be done with cautery knives and clamps must be followed by another course of radium or roentgen therapy or both, to insure as intense a degeneration of the disease area as possible.

2. Radium and roentgen rays form the ideal palliative treatment in inoperable and recurrent malignant diseases. Cures are very few. The advantages as a palliative are, however, superior to any other known method. Whether surgical eradication should be recommended after a local cure has been obtained by radiotherapy cannot as yet be stated. Microscopic examination of radiumized tissue seems to justify such a procedure.

3. In the benign hemorrhagic diseases of the uterus and the inflammatory myopathies radium has proven of the utmost therapeutic value. Without causing mutilation it brings about a cessation of the hemorrhages and leucorrhea and very frequently a disappearance of the myoma.

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A NEW INCISION FOR APPENDECTOMY.

By Leigh F. Watson, M. D., Chicago.

Many writers have noted that in the cadaver the base of the appendix is found at McBurney's point, while in the living subject it is below this point, usually on a level with the center of Pourpart's ligament. A number of operators have called attention to the ease with which the appendix can be removed when operating for right inguinal hernia. Since 1910, I have used a new incision, with its center over the base of the appendix, and believe that in many cases it is an improvement over those in general use.

Incision: A point one and one-half inches from the right anterior superior spine, on a level with a line connecting the two superior spines, is selected for the beginning of a vertical incision which extends directly downward for two to three inches to a point just above, and to the inner side of the internal abdominal ring.

Advantages: Traction to expose the appendix is avoided, because this incision, in the external oblique and its aponeurosis, the most resistant structures, is directly over the base of the appendix. It can be enlarged without weakening the abdominal wall. The ilio-hypogastric and ilio-inguinal nerves are not injured because the incision lies between them. Because this incision is made over the cecum, the small intestines do not crowd into the wound as they do when the McBurney and lateral rectus incisions are used.

30 N. Michigan Ave.

Bismuth Iodoform Paraffin Paste in Recent Gunshot Wounds.—Colledge and Drummond, in The London Lancet, have employed this paste in connection with the surgical treatment of recent gunshot injuries in a large number of cases and set forth the following as the advantages of the method: The wound can be sutured, making prolonged drainage unnecessary and usually avoiding suppuration; no change of dressings is required, permitting prolonged rest and avoidance of pain; the facility of transport is greatly enhanced and its discomfort much decreased, especially is this true in cases of compound fracture; finally the liability to gas gangrene is diminished. The technic so successfully employed by the authors begins with a primary thorough cleansing of the entire wounded part with ether soap. The wart is then surrounded with dry, sterile towels. The superficial wounds are excised and the deeper ones opened widely; all foreign bodies and fragments of bone are removed and devitalized muscles are excised. Bleeding points are caught with Spencer-Wells forceps and the raw surface is then swabbed with methylated spirit. Following this a paste of two parts of iodoform and one of bismuth subnitrate in enough liquid paraffin to make a thick cream is smeared all over the surface of the wound, including the ends of bones, with a piece of dry gauze. The paste is well rubbed in so as to form a thin film on the surface and all excess is removed. The clamped bleeding points are then ligated, gaps in the muscles are closed by catgut stitches when necessary, and the wound is sutured with sterile fishing gut. A dry gauze dressing is applied and covered with wool. If the outer dressing becomes saturated with discharge it may be changed, but the inner layer of gauze is left in place. The treatment is usually followed by a general reaction with fever lasting for one to two days. The method has not been followed by any cases of iodoform or bismuth poisoning, probably due to the use of relatively small amounts of the paste. It has proved of great value in all forms of infected wounds as well as in amputations.

The Harrison Act.

As amended by the new war revenue act, will be mailed postpaid to any druggist, physician, dentist or veterinarian who will send a postal request therefor to "Mailing Department, Parke, Davis & Co., Detroit, Mich." Please observe directions strictly.

Herpes Zoster: Its Cause With Varicella.—Cranston Low, in The British Medical Journal, reports three cases of herpes zoster, each of which was followed by one or more cases of chickenpox either in the same family or in the same hospital ward, after an interal of nineteen, thirteen, and two days respectively. These cases support similar observations made first by Bokay in 1892 and since then by a number of other observers. In all the recorded cases the chicken-pox eruption appeared in from eight to twenty-one days after contact with a case of herpes zoster. In one of the author's cases, two days interval only elapsed between the appearance of herpes zoster and chicken-pox but as both patients had been inhospital for some time, the infection was probably brought by visitors. The converse condition, that is chickenpox followed by herpes zoster, has also been reported by several observers, but not so frequently. Further, cases have been recorded from time to time in which herpes zoster and a varicella-like eruption have occurred in the same individual. These facts would lead one to conclude that the two conditions are due to the same virus. The author would go further, and suggests that in herpes zoster the infection is probably local, through the nose, along the lymphatics, round the olfactory nerves, as has been shown to be the mode of infection with the virus of anterior poliomyelitis, which has many points of analogy with herpes zoster. Once the virus reaches the meninges and cerebrospinal fluid, it is easy for it to get to the ganglia on the sensory nerve trunks. In chicken-pox there is probably a blood infection with the virus. In cases in which the two conditions appear, the virus probably attacks the ganglia first and four or five days later, gets into the general circulation. Microscopically, the vesicle in herpes zoster is similar to that seen in the early stages of varicella. The lesions in chicken-pox occur in groups, suggesting that a small branch of the perpheral nerve is the seat of a focus of infection. Moreover, many of the chickenpox lesions show a vesicle with no inflammatory halo around it, as is seen in pemphigus and dermatitis herpetiformis, which are generally considered to be nerve lesions. These facts would seem to show that the eruption in varicella is primarily not due to the virus settling in the end capillaries of the skin but in the nerve endings or minute nerve twigs in the skin. No casual organism has yet been discovered in chickenpox or herpes zoster. It is possible that the virus belongs to the group of filter-passing ultramicroscopic organisms mentioned by Flexner in his Huxley lecture as being the cause of poliomyelitis and vaccinia among other diseases. Since both chicken-pox and herpes zoster occur in epidemic form, if they have a common origin one would expect simultaneous epidemics to occur. The only instance on record is that reported by Heim as occurring in Budapest during April and May, 1912. As neither disease is notifiable, statistics are wanting. As regards immunity, an attack of chickenpox usually conveys immunity for life. Similarly, an attack of herpes zoster is rarely followed by another; most of the recurrent attacks are attacks of peripheral neuritis due to pressure by a tumor on nerves. An attack of varicella does not necessarily protect the individual against herpes zoster. It is possible that an attack of herpes zoster may confer immunity to chicken-pox, but individuals who have herpes zoster in many cases are past the age when they are likely to have the former. Further knowledge is required on this point. In cases of herpes zoster which occur whilst arsenic is being taken, the question arises whether the arsenic produces an arsenical neuritis with the eruption in the distribution of the nerve, or whether the arsenic renders the nervous system more susceptible to infection with herpes zoster. The latter would seem to be the more probable explanation, because even although the patient continues to take the arsenic, the herpes zoster runs a normal course, heals up, and does not recur. Parkes Weber, moreover, reports an instance in which a patient was taking arsenic and developed herpes zoster with a generalized varicella-like eruption, and another patient from the same ward developed chicken-pox fifteen days later.

Unilateral Gynecomasty after Injury to the Testicle.—Apert and Declety relate the following curiosity of medicine: A soldier, aged 25, was wounded in the scrotum in October, 1917. In the following March he was found to have a right breast agreeing in all respects with that of a young girl at the beginning of puberty. Investigation showed that the right testicle had been involved in the injury. Such behavior has been known to follow only mild lesions of the testis—never severe traumatism or total destruction or castration. The precise mechanism cannot be comprehended but both the nervous and endocrinic systems must be involved.—La Presse Medicale.

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MEDICAL EPITAPHRY.

This is not about a cemetery. And yet it is. But it is not about a cemetery of dry medical bones, neither is it about a cemetery of flesh that has been food for worms; but it is about the deceased medical man, who still lives. So it is neither an obsequies, a biography, nor a resurrection.

It is about epitaphs. But about epitaphs that have been carved upon the structure of living medicine. Epitaphs that have been carved by the tireless use of the scalpel; by the use of the test tube; by the microscope; by lonely watching at the side of the sick-bed. It is about epitaphs that are now spotlights in medicine —epitaphs that have in fact become essential parts of medicine itself.

Medicine as here thought, comprises of course, Anatomy, Physiology, Pharmacology, Bacteriology, Pathology, and Surgery in all of the surgical specialties. Medicine has conferred honor upon men by giving to medical things, the names of men, and these names are epitaphs; and in turn men have been an honor to medicine by making their work worthy of notice, and this kind of honor spells out perpetuity of memory.

Eustacheo and Falloppius were contemporaries of the sixteenth century. One gave to anatomy the Eustachean tube, the other gave the Falloppian tube. Which made his contribution to anatomical knowledge first, may never be known, but the interdependence of anatomic structures is well shown by the very obvious facts that without the Falloppian tube, there would soon cease to be any Eustachean tube; and on the other hand, Falloppian tube life would be a burden, without the Eustachean tube. Throughout the works of descriptive anatomy there are a hundred such epitaphs. The list is much too long to copy. Sylvius, Willis, Nealton, Scarpa, Peyer, Gimbernat are a few of the anatomical epitaphs that have been so deeply carved into anatomy that they have survived the irreverence of the centuries; while His, seems to have indelibly written his name upon the anatomical research of the present century.

Physiology is, singularly enough, almost barren of epitaphry. In a single instance only, has a physiologic substance been given the name of its discoverer, and in that case the name is used for business purposes. Such a name will not last for long. But there is no apparent reason why the diastases, and the enzymes, and proteins, and albumins with all of their supplemental chains should not be given the names of their discoverers. But physiology has not honored her investigators in that way.

Pharmacology has likewise allowed its workers to pass on, without epitaphs; but in the application of pharmacology to the treatment of disease—in the mere mixing of drugs for the treatment of disease there are many epitaphs. Who for instance could practice medicine without the Seidlitz, or Minerer, or Dobell? Therapeutics furnishes scores of such epitaphs, of the long ago, and modern medicine half as many more.

In bacteriology there is the Koch' bacillus, and Freidlander's, and Pfeifer's, and Welch's and a few others, but not nearly so many epitaphs as the importance of the discoveries would seem to justify.

Pathology furnishes fifty such names as Addison's disease, Hodgkin's, Reynaud's, Weil's, Parry's—names that are the living epitaphs of its investigators.

Symptomatology, of all branches of medicine, is the readiest to write epitaphs for those who make note of phenonfena that accompany physical disease. These phenomena are principally neuro-muscular in nature. This kind of symptomatology is of recent development and it remains for time to tell whether the more than a hundred "signs" that have already been chartered—it remains to be seen whether the names of observers that have been given to these signs will go forward as living parts of medicine along with that of McBurney, Chenne-Stokes, and Babinski, or whether they are proved to be but the easy impressions of today, to be as easily forgotten tomorrow. At the present time, however, their voluble mention by the clinician as being present or absent in disease, is taken as unmistakable evidence of very up-to-dateness, in things medical.

Surgery, because it has been longer at it than other branches of medicine, equals in epitaphs, the records of all other branches combined. But their commonness—their great number in a decade, makes it impossible for many of them to carry their names over into the next edition of any work upon surgery. So it comes about that the carving of a lasting

living epitaph in surgery of the present, has little chance of accomplishment. Modifications are easy, and the epitaphical operation has added to it name after name of modifiers, until the name of the maker of the original operation is lost in the galaxy of the famous.

A FALSE ECONOMY.

The American people (or rather, their lawmakers and representatives) have some odd ideas as to what constitutes economy. Our lawmakers are ever ready to appropriate funds for memorials, development of muddy creeks, building of unnecessary public buildings, and whatnot—but when they approach the question of salaries for the public officials who do the routine duties for nation or state, they are suddenly seized with a niggardliness which passeth understanding. We have recently seen some good examples of the result, in the resignations of some of the nation's most efficient men, for the simple reason that they could not live on their salaries.

And nowhere do we find better examples of this false economy than in the pay of employees of state hospitals and similar institutions. These same lawmakers are ever on the alert to criticize the efficiency of such employees, and love to conduct investigations and make reports as to how badly the institutions are run. They expect maximum efficiency, long hours of work, and the best of care for the inmates—but are they willing to pay proper wages for those who possess the qualifications for the work? They are not. Physicians in insane hospitals must possess special knowledge of psychiatry, a branch of medicine which the average doctor knows as little about as he dares, and which he is apt to regard as a necessary evil. The physician who treats the insane must possess infinite patience, sympathetic understanding of human motives, sacrifice of any selfish interests to the interests of his charges. He must be tied closely to his work—for very few institutions possess anything like an adequate number of staff-men. And what does he get for all this—a meagre salary not equal to that of a skilled laborer. He gets maintenance—such as it is. Often he is not allowed maintenance for his family, if he is rash enough to marry. He must put up with many discomforts, which are the inevitable accompaniment of institution life. A partial recompense lies in the good that he can accomplish in a few cases, bringing grateful recognition from relatives and friends. But that does not put money in the bank—and even an institution doctor may be mercenary enough to want to lay by something for his declining years.

Salaries in insane institutions vary, but range from $900 to $1,200 for the lower positions, to $3,000 to $5,000 for superintendencies. The higher-paid places are few, and too often gained by political influence. What is a salary of $1,200 to a highly-trained professional man who is expected to maintain social standards rather above those of the skilled laborer who earns the same money? Salaries in such institutions should vary in accordance with the training and special knowledge of the physician—giving him an incentive to keep up with the developments of a branch of medicine which is gaining much new knowledge at the present time. No physician should receive less than $2,000. But I fear the millenium will come before these underpaid and over-modest officials will obtain their rights, for they are not the type of men who blow their own horns, perhaps for reasons of "professional etiquette," perhaps because they fear what the politicians would do to them were they to demand better pay. So it is up to those of us in private practice to do their boosting for them.

SEX HYGIENE.

There has never been, in this country's history, a more appropriate time to educate its people in matters of sex hygiene and venereal control. This fact has been recognized by social welfare organizations, and no little work has been accomplished. However, much more remains to be done, and it is the duty of every physician to constitute himself a committee of one to use every opportunity to advance the work. The Public Health Service is enrolling physicians in a campaign for the proper treatment of venereal disease, and urging the prompt reporting of these diseases in such states as require it by law. This is a good beginning, but only a beginning. The saying "To make a gentleman, begin with his grandfather" is applicable here. To control venereal disease, we must begin in childhood to educate the individual in sex matters, and at the proper age, to impress upon him the perils of venereal disease.

Such instruction must be given in a whole-hearted way, by clean-minded instructors who have no sex-difficulties themselves. After teaching the youth that sexual intercourse is normal, but

that continence has no harmful effects, that there is no necessity for sexual indulgence before marriage, after warning him against onanism in a manner which will leave no false impressions, then teach him the value of clean manhood and womanhood, and the disastrous and far-reaching results of venereal disease.

However, such instruction can not be given to every individual in the same manner. We must make allowance for such personal traits as morbid fears, excessive curiosity in sex-matters, fantastic theories about sex and its problems, etc. Otherwise, irreparable harm may be done to the individual, with a tendency to exaggerate latent psychotic traits. The precox-type of individual especially, must be dealt with most carefully, or the instructor may be responsible for the precipitation of a serious psychosis in pubescent individuals. While psycho-analysis and its theories are not as yet universally accepted, it paves the way for a better understanding of the individual, and those who instruct our youth in sex matters ought to have a working knowledge of psychoanalysis. With a properly-trained instructor, the youth receives such knowledge as is good for him, imparted in a way calculated to avoid future worry in sex matters. If properly approached, such instructions will do much good—if approached wrongly, it is difficult to estimate the harm which may result. And these instructions should be given to girls, as well as to boys, for women have their sex-problems, serious ones, and there is much opportunity for psychological prophylaxis, as well as for venereal prophylaxis.

AN UNWARRANTED ATTACK ON THE LATE SURGEON GENERAL AND GENERAL NOBLE.

One who maintains certain respectful considerations for the forms of courtesy in the editorial work of medical journalism can but feel a distinct shiver at the uncalled for brutality and coarseness of expression in some of the utterances recently seen in certain Easter medical journals. One would pause to wonder what spirit had come over the medical editorial mentality in some journals sancta in that such ribald utterances have been sent forth in the pages of respectable medical journals as has recently appeared in criticism of former Surgeon General W. C. Gorgas and General Robt. E. Noble.

Pursuing its own standards of gentility in the handling of the names of doctors recognized everywhere and of all men as truly representative gentlemen of the profession, this Journal does not feel in respect to itself, at liberty to quote verbatim some of the silly and reckless statements regarding these fine doctors of the U. S. Army, but it is indeed a crying shame that medical journal editors should so far lose their delicate professional poise as to allow their editorial pages to descend to the level of deepest depths of the ordinary extreme partisian newspaper of the day.

That General Gorgas is an accomplished Southern gentleman who entered the U. S. Army through the regular channels many years ago, and that he has during a long career in the service rendered, not only his government but the cause of humanity as well, services of a peculiarly able character, that not only has his record, viewed in the light of performance of the usual ordinary routine of military medical duties been creditable, but that he has had the distinction of achieving unusual and exceptional honors from having performed most extraordinary service in the sanitation of the Panama district, everyone knows are facts known to none better than our profession, and now that General Gorgas after more than reaching retiring age, has given place to another as Surgeon General and with vigor taken up another phase of sanitary effort in the tropics when he could easily have rested on his comfortable salary and his past honors is thus violently assailed by respectable journals of his own profession of medicine in language challenging the best efforts of the fishwife, constitutes crime against the decencies of professional journalism we hope never to witness again in this country.

Apparently until a few months ago, General Gorgas was in good standing with these journal editorial writers of a portion of the Eastern medical press—at least until it was evident the war with Germany was won, all spoke kindly of him, and then, and not until then, did they begin to criticise and find fault with his management of the conduct of the great affairs of the Surgeon General's office. Had General Gorgas' administration of the medical department of the U. S. Army been a proper subject of attack, unquestionably it would have received just criticism long ago, and the waiting until the close of the war, and in the light of the splndid record the service has attained under Gorgas' direction, to attack him now admits of only the same explanation

that is made for the extreme and bitterly partisan attacks made on the President by political party opponents.

Politics in the ordinary partisan way have been kept, and properly so, from the influencing of the affairs of the army medical department, and it is very nauseating to all fair minded gentlemen of the profession to witness an attack on the late head of the medical staff of the Nation absolutely groundless, and susceptible of explanation only on the oftquoted suggestion made during the recent political campaign to the effect there was "too much of the South in the saddle" and "Southerners were not capable of running the government."

Of course this sort of an attack can do General Gorgas no harm. His record is made. No man, within or without the profession, may write the history of American medicine and sanitation and dare omit his great work in Panama, and the fact that he was continued in the office of Surgeon General of the U. S. Army during the Great War, and retired at the end of his term within a few weeks of the armistice, when the work had been done, will be remembered as well.

But the attack on General Noble who was nominated by the President some time since for Brigadier General, Medical Corps U. S. Army, in similar vein, with manifest like import, and without a scintilla of evidence to support the wild charges, is calculated to create sentiment adverse to him.

While it is true General Noble was advanced rapidly during the last third of the war, it is a fact that the work of Robt. S. Noble in organizing and securing their entrance into the Medical Corps, U. S. Army, of some thirty-five thousand of the choicest medical men of America is an attainment any officer of the army might well be proud of, and it can but redound greatly to his credit. Having secured all the physicians the nation needed, and having in the main brought them into the army as a class, without draft, but as volunteers, Major Noble was more than jusly entitled to every honor and advancement that has come to hi msince the beginning of hostilities with Germany.

To say that none other could have done so well is absurd; and not to be thought of by his warmest partisan, but the fact is he was placed in a position of extreme delicacy and difficulty, and he managed his grave responsibilities with great credit to the medical profession and honor to himself.

All honor to General Noble. He has done well with a most important work in this war, and medical men all over this Nation will ever view with respect and admiration the great service he rendered this government in an hour of need, and despite the ravings of sectional hatred as manifested in these attacks, his reputation is secure, and his honors worthily attained.

DIAGNOSIS IN MENTAL DISEASE.

A certain famous American surgeon has recently classified all acute abdominal conditions demanding operation as "Acute Surgical Abdomen" and he makes no more definite diagnosis until the abdomen is opened, and the condition properly treated. This seems a radical step to those who are accustomed to collect all possible data, and then formulate a definite diagnosis, as "acute purulent appendicitius," "acute cholecystitis" and the like. And yet, if one gives the matter a moment's thought, what particular advantage is gained from such painfully worked out diagnoses, if we know that the condition is one demanding operation? In reality, it makes very little difference to either patient or physician.

And in psychiatry, many physicians are beginning to take the same platform. If a patient suffers from a (non-organic) mental disorder, the making of an exact diagnosis is of little real aid to the patient or his physician. The question is not "What is the matter with this case" but "What is the personal difficulty of this patient, and how can the problem be best approached?" Every mental case is more or less a law unto itself, though we must acknowledge that certain general types of cases have certain general trends. Those who treat this type of case know how difficult it is to give a reliable prognosis in a given case. The reason is that an individual who has a mental upset, has it because he has met some personal problem which he was incapable of solving, and the acute discomfort of which precipitated a (psychic) flight from reality into a mental state in which his difficulties are put more or less out of reach. No two individuals react in the same way, and no two have the same problems, or the same powers of adaptation. Therefore every case must be studied as an individual problem.

Therefore, given a case of mental disease, the question of diagnosis is of little importance; the question of the individual problem and the patient's powers of adap-

tation is the real issue. These problems can not be properly estimated by the untrained physician, and an unguarded or tactless approach to such a case may be productive of untold harm. The untrained physician can not venture a prognosis with such data as he is able to collect, and as a rule is not competent to advise as to treatment. Unless one has special training in psychiatry, it is the part of wisdom to refer such cases to the specialist. The idea that "rest at home" or "travel to divert the patient's mind" is the correct treatment for such cases is highly erroneous. As a matter of fact, remaining at home is often the worst possible thing for the patient, and it is certain that a man who is worrying over impotence is not going to be cured by climbing the Rockies or seeing Europe. The thing is to tactfully elicit from the individual a detailed study of his life and personality, and gradually ferret out the particular personal difficulty which led to the mental upset. Pages could be written in this strain, but the purpose of this editorial is simply to call attention to the fact that in psychiatry, diagnosis is a wholly secondary consideration, and that the individual's personal problem is the real issue.

ALKALOSIS AGAINST ACIDOSIS.

During the prevalence of the influenza epidemic there were observers, or students, or investigators who came to the conclusion that the general pathology of the disease was a condition of systemic acidosis. It was an attempt to explain away a very specific perilous fact, by the substitution of a generalized harmless theory. The mind always works in that way.

The theory did not try to point out either the organic, or functional origin of the acidosis, and of course still left as unsolved as ever, the pathogenesis of influenza.

Singularly enough—psychologically it is more consoling and hence more satisfactory to contemplate the imagined workings of a theory, that has studiously been made to fit into the voids of the unknowable, than it is to deal with facts as facts, until the time comes when the facts are translatable into something like scientific demonstrations. And in the vocabulary of the street, the acidosis theory in the last few years, has been worked for all it is worth; and the inevitable reaction to the theory of acidosis has been the formulation of the opposing or balancing theory of alkalosis.

A few months ago, the Journal editorially discussed The Cause of Life. That discussion, was before the coinage of the word alkalosis. In the discussion the acid ion was accredited with being the cause of physical death, and the alkaline ion was, by the same process of reasoning, shown to be the cause of life. The systemic dominance of the alkaline ion is alkalosis, and the dominance of the acid ion is acidosis. Midway between alkalosis and acidosis, is everyman's land of physical well being.

Biologically it must be conceded that in the normal body there is ever going on between alkalinity and acidity, a war for supremacy. If this war were to stop, functional life would stop. The resultant energey from the meeting of alkalinity and acidity, is the spark of life. Outside the body, when properly manipulated, that energy is called electricity, or at least Galvanism, or mayhap Farradism. But that does not matter! The point here, in this discussion is, that in the last analysis physical function seems to have a chemical start; seems to run chemically; and seems to come to a chemical stop. This though comes far short of meeting the demands of scientific exactness. It is speculation only. But the speculation with all of its shortcomings, is the keyword to both acidiosis, and alkalosis.

Somewhere in the body there is a laboratory that manufactures bases, and somewhere there is a laboratory that makes acids. Presumably the output of one laboratory stimulates production in the other; but it is conceivable that overproduction on the part of one laboratory might cause collapse of functioning in the other. There would be acidosis, or alkalosis as the case might be. But it does not follow that an increased production of bases, will cure an over-production of acids, though it is somewhat reasonable to assume that the production of alkalosis might serve to hold in check the ravages of acidosis, until that which was overstimulating acid production, could be got rid of.

It is an interesting hypothesis that immunity from infection—such as is the immunity from infection of influenza—is nothing more than the maintenance of proper balance between the production of bases and acids? The parathyroids, more than any other structure of the body, seem to preside over this equilibrium. Then if a general acidosis makes influenzal infection possible—then it must be

that something within or without the body has thrown the parathyroids out of physiologic functioning. And then again—and here comes in the theory of treatment of influenza by the production of systemic alkalosis—if that acidosis can be overwhelmingly antagonized by alkaline, or by aklalinity producing medicines, the virulence of the infection may be kept in restraint while the infective germ is running its natural life-course in the body. Alkalosis theoretically thus antagonizes acidosis.

The Non-Surgical Treatment of Endometritis.—O'Brien, in Texas State Journal of Medicine, writes that the microscopic diagnosis of an inflamed endometrium cannot be made by the condition of blood vessels or stroma, on account of normal cylic changes in these structures, but rather by the presence of round or plasma cells.

Except in cases of uterine polypi, submucous tumors, carcinomata, etc., no inflammation of the endometrium itself is directly responsible for excessive, scanty, or irregular uterine hemorrhage; in other words, menorrhagia and metrorrhagia are not caused from diseased conditions of the ovaries.

That the nutrition of the uterus is absolutely dependent on the secretion of the ovaries is a proven fact.

The secretions of the thyroid pituitary body and mammary glands also affect to a certain degree the nutrition of the uterus. Excessive secretion of the thyroid has an inhibitory effect on the function of the uterus.

The writer has found that long, thin, wool tampons placed in the cul-de-sac with a dressing forceps through the speculum, the medicated part being placed at the external os and the greater part of the tampon packed firmly enough to tilt forward and support the fundus, gives these patients great relief. The proper placing of tampons does as much or more than the medication, by supporting the fundus, helping the circulation and favoring drainage, especially in the recumbent position. In retropositions of the uterus, constitutional treatment is always indicated, as there is some cause for the relaxed condition of uterine ligaments.

The use of continuous hot douches will work wonders with a boggy, swollen uterus, the mucous membrane shriveling like a washer-woman's hands. These douches should not be given for a period longer than 30 minutes.

EDITORIAL NEWS ITEMS

Lt. Col. Chas. O'H. Laughinghouse, M. C. U. S. Army, has been discharged from the service and resumed practice at his home in Greenville, N. C. Volunteering for service in summer of 1917 Dr. Laughinghouse received intensive U. S. Army training in administrative work, sow active service in Oklahoma and Texas, and on the eve of its sailing was placed in command of U. S. Army Base Hospital Unit No. 85 with which he saw service in France. About the time of the armistice he was charged with responsibility of organizing one of the largest hospitals in Paris, and after creditably performing this duty was honorably discharged.

N. C. Medical Association—The 66th annual session of the Medical Society of the State of North Carolina will be held at Pinehurst on April 15-16-17th. The ninth annual session of the North Carolina Health Officers' Association will also be held at Pinehurst on April 14th. The Carolina Hotel which is one of the largest and finest in this country will be headquarters for the association. It is expected this meeting will be very largely attended and the indications are that it will be one of the largest meetings in the history of the association. Judging from the incomplete program that has just been received there will be between 80 and 100 papers and addresses delivered or read during the different sessions.

There will be a new North Carolina organization associated with the society that will hold its first meeting on the 16th of April. We have reference to the North Carolina Hospital Association.

The County Public Health Department of Raleigh, N. C., has established two clinics for the indigent people of that city, one of the clinics is to be at Rex Hospital and the other is to be at St. Agnes Hospital. Dr. James Keiger of the State Public Hygiene is furnishing medical supplies to be used in these clinics. Dr. Anna Frees is the bacteriologist attached to these clinics.

Major J. B. Murphy, son of the late P. L. Murphy of Morganton, N. C., was married recently to Miss Ray Slater of Boston, Mass.

Dr. Murphy is a graduate of the University of North Carolina and since his graduation in medicine has attained distinction in the medical world. He is now at the Rockefeller Institute in New York.

Dr. H. C. Irwin, formerly of Charlotte, N. C., and now in France at the head of a Base Hospital, has recently been promoted to the rank of Lieutenant Colonel.

Dr. W. T. Carstarphen, formerly of Wake Forest, N. C., who is now in France has been promoted to the rank of Lieutenant Colonel. Dr. Carstarphen has made a fine record in the army and his rapid promotion is a source of great pleasure to his many friends.

Fayetteville, N. C., is to have a new hospital to be constructed by Dr. R. L. Pittman of that city. The building is to have about fifty rooms for patients and will be thoroughly equipped. It is predicted that it will rank among the best institutions of its kind in the South. The cost of the institution will be in the neighborhood of $65,000.

Dr. Pittman, who will be in charge of the Surgical Department, has been for seven years a member of the surgical and medical staff of the well known Highsmith hospital. Dr. Pittman is a well equipped medical gentleman. He graduated at the Jefferson Medical college in 1910 and subsequently was an intern at the Presbyterian hospital of Philadelphia for a year or more and was house surgeon in the same institution for twelve months.

Fayetteville already has two fine hospitals, the Highsmith and the Cumberland General.

Major Joseph H. Way, M. C. U. S. Army, has received honorable discharge from the federal service and returned to his home at Waynesville, N. C., where he has resumed the practice of his profession. Dr. Way was one of the early volunteers from the medical profession to the army service and came to Charlotte with the coming of the first soldiers to Camp Greene. Active always in the affairs of medicine it was naturally expected he would become much interested in the medical affairs of the army. He was later sent for special courses to the Rockefeller Institute, New York City, and to the U. S. Army School for Tuberculosis in New Haven, Conn., returning to Camp Greene where in the summer of 1918 he organized the Reconstruction Service in the six newly erected barracks provided for that purpose. This work was developing finely when the armistice changed the plans of war, and with the closing of Camp Greene March 20, 1919, the hospital also closed. During his long stay Major Way was recognized as one of the most skilled members of the staff, and his work and influence in the big Base Hospital was helpful and constructive always. The Second and Fourth Liberty Loans were cared for by him in the Base, and during the last campaign he represented the Hospital in speaking at night in the various townships of the county. An honorary member of the Mecklenburg County Medical Society, he often attended its meetings and was ever a welcome guest the local profession as well as Charlotte citizens generally who appreciated him and regretted his departure for his mountain home.

Lt. Col. Chas. O'H. Laughinghouse, M. C. U. S. Army, has received honorable discharge and returning to his former home at Greenville, N. C., has resumed the care of his extensive practice. It was Dr. Laughinghouse's good fortune to receive intensive training in U. S. Army special work in the early winter of 1917 after which he did most effective organization work in Base Hospitals in Texaxs, later being placed in command of Base Unit No. 85 with which he went abroad. Later he was assigned the onerous duty of organizing one of the largest U. S. Army hospitals in Paris, after the completion of which he was ordered home and retired with the special thanks of the Surgeon General's Office for his particularly efficient work.

Dr. Wade H. Sherril, formerly of Sanatorium, N. C., died March 25th at the residence of his mother near Newton, N. C. Dr. Sherril graduated from the Jefferson Medical College, Philadelphia, in 1917. Soon after his graduate his health failed and he went to Sanatorium, N. C., for treatment and served for about a year as one of the atending physicians. Dr. Sheril was thirty years of age and was a bright young physician.

The Johns Hopkins Hospital of Baltimore has received a gift of $400,000 for the erection of a building to serve as a woman's clinic. The gift is anonymous.

Sanitarium at Chick Springs, South Carolina.—According to reports $125,000 worth of stock has been subscribed for the Steedly Sanitarium which is to be constructed at Chick Springs, S. C. Dr. B. B. Steedly is to be at the head of the institution. The handsome brick hotel building of that well known resort is to be partly used for the hospital. Dr. Steedly annouces that he expects the institution to be open by the middle of June.

Dr. Wm. K. Reid of Charlotte, N. C., died April 4th after an illness of one week. Dr. Reid was 52 years old and spent his entire life in this county. He was educated at Davidson college this state and subsequently studied medicine at the University of the City of New York, graduating at that institution in 1891 and during the same year received his license from the state board of medical examiners of North Carolina and during the same year joined the North Carolina Medical Society. He was for 28 years an honored member of this association and a valuable member of the Mecklenburg County Society ever since it was organized.

After Dr. Reid's graduation he located at Pineville, North Carolina, and did a large and successful practice there until 12 years ago he came to this city and has been a very active and prominent member of the profession. He served as city physician for a number of years and only retired from that position about a year ago.

Dr. Reid's death was peculiarly sad. He leaves a wife and eight children all of whom were deepndent upon him.

The Jones County Medical Society of Mississippi, at a recent meeting, elected the following officers: President, Dr. R. H. Cranford; Vice-President, Dr. E. C. Armstrong; Secretary-Treasurer, Dr. J. R. Kittrel; Delegate to the State Medical Association, Dr. C. R. Garraway.

The Savannah, Ga., Medical Society, at its March meeting, elected the following officers: President, Dr. Walter Norton; Vice-President, Dr. William H. Meyer; Secretary-Treasurer, Dr. E. L. Bishop; Delegates to the State Medical Association, Dr. Lawrence Lee and Dr. I. W. McDowell. Dr. C. H. Meldrin was re-elected on the House Committee and Dr. W. A. Cole was made a member of the Board of Censors.

The North Carolina Orthopaedic Hospital.—The General Assembly that has just adjourned has donated $20,000 for the building fund of this hospital making a total from the state of $40,000. $30,000 has been subscribed from other sources. The Legislature also provided a maintenance fund of $7,500. The work will begin on the building at once. This hospital and school is to run for the benefit of orphan children of the state of sound mind who are now debarred from all other state institutions. This Hospital is to be located at Gastonia, N. C.

PROGRAM

SIXTY-SIXTH ANNUAL SESSION OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA, APRIL 15-16-17, 1919. PINEHURST, N. C.

Ninth Annual Session North Carolina Health Officers' Association April 14, 1919, Pinehurst.

First Annual Session North Carolina Hospital Association April 16, 1919, Pinehurst.

Officers 1918-1919.

President—Dr. Cyrus Thompson, Jacksonville, N. C.
First Vice-President—Dr. J. W. Halford, Lillington, N. C.
Second Vice-President—Dr. T. W. Davis, Winston-Salem, N. C.
Third Vice-President—Dr. A. McN. Blair, Southern Pines, N. C.
Secretary-Treasurer—Dr. Benj. K. Hays, Oxford, N. C.

Councillors 1916-1919.

First District—Dr. W. H. Ward, Plymouth, N. C.
Second District—Dr. K. P. B. Bonner, Morehead City, N. C.
Third District—Dr. J. W. Tankersley, Wilmington, N. C.
Fourth District—Dr. C. F. Strosnider, Goldsboro, N. C.
Fifth District—Dr. Ben. Hackney, Bynum, N. C.
Sixth District—Dr. Wm. deB. MacNider, Chapel Hill, N. C.
Seventh District—Dr. J. E. S. Davidson, Charlotte, N. C.
Eighth District—Dr. J. W. Ring, Elkin, N. C.
Ninth District—Dr. M. R. Adams, Statesville, N. C.
Tenth District—Dr. C. V. Reynolds, Asheville, N. C.

Chairmen of Sections.

Practice of Medicine—Dr. E. J. Wood, Wilmington, N. C.
Surgery—Dr. L. N. Glenn, Gastonia, N. C.
Gynecology—Dr. H. W. McCain, High Point, N. C.
Obstetrics—Dr. J. R. Alexander, Charlotte, N. C.
Public Health and Education—Dr. D. E. Sevier, Asheville, N. C.
Pediatrics—Dr. Chas. Roberson, Greensboro, N. C.
Physiology, Pathology and Chemistry—Dr. S. A. Stevens, Monroe, N. C.

Anatomy, Materia Medica and Therapeutics—Dr. Wm. deB. MacNider, Chapel Hill, N. C.

Eye, Ear, Nose and Throat—Dr. A. M. Whisnant, Charlotte, N. C.

Committee on Arrangements.

Chairman—Dr. L. B. McBrayer, Sanatorium, N. C.

Committee on Scientific Work.

Chairman—Dr. H. H. Newman, Salisbury, N. C.; Dr. L. W. Elias, Asheville, N. C.; Dr. A. S. Root, Raleigh, N. C.; Dr. L. B. McBrayer, Sanatorium, N. C.

Committee on Public Policy and Legislation.

Chairman—Dr. J. M. Parrott, Kinston, N. C.; Dr. J. M. Templeton, Cary, N. C.; Dr. L. B. McBrayer, Sanatorium, N. C.

Committee on Publication.

Chairman—Dr. Benj. K. Hays, Oxford, N. C.; Dr. C. S. Mangum, Chapel Hill, N. C.; Dr. J. P. Monroe, Sanford, N. C.

Committee on Obituaries.

Chairman—Dr. H. H. Dodson, Greensboro, N. C.; Dr. T. C. Johnson, Lumberton, N. C.; Dr. L. N. Glenn, Gastonia, N. C.

Committee on Finance.

Chairman—Dr. E. R. Russell, Asheville, N. C.; Dr. Z. Fearing, Elizabeth City, N. C.; Dr. P. R. Hardee, Stem, N. C.

Delegates to American Medical Association.

Dr. C. P. Ambler, Asheville, N. C.; Dr. H. A. Royster, Raleigh, N. C.

Alternates: Dr. A. J. Crowell, Charlotte, N. C.; Dr. J. T. J. Battle, Greensboro, N. C.

Delegates to Virginia Medical Society.

Dr. H. D. Walker, Elizabeth City, N. C.; Dr. W. F. Hargrove, Kinston, N. C.; Dr. Carroll Wiggings, Winston-Salem, N. C.

Delegates to South Carolina Medical Society.

Dr. P. P. McCain, Sanatorium, N. C.; Dr. R. S. Lafferty, Charlotte, N. C.; Dr. Gilbert McLeod, Carthage, N. C.

Board of Medical Examiners of the State of North Carolina.

President—Dr. John G. Blount, Washington, N. C.; Secretary, Dr. Hubert A. Royster, Raleigh, N. C.; Dr. J. F. Highsmith, Fayetteville, N. C.; Dr. E. G. Moore, Elm City, N. C.; Dr. John Q. Myers, Charlotte, N. C.; Dr. M. L. Stevens, Asheville, N. C.; Dr. Isaac Taylor, Morganton, N. C.

North Carolina State Board of Health.

President, Dr. J. Howell Way, Waynesville, N. C.; Dr. Richard H. Lewis, Raleigh, N. C.; Col. J. L. Ludlow, Winston-Salem, N. C.; Dr. E. C. Register, Charlotte, N. C.; Dr. Thomas E. Anderson, Statesville, N. C.; Dr. Chas. O'H. Laughinghouse, Greenville, N. C.; Dr. Edward J. Wood, Wilmington, N. C.; Dr. F. R. Harris, Henderson, N. C.; Dr. Cyrus Thompson, Jacksonville, N. C.

State Board of Examiners for Nurses.

Miss Julia Libby, R. N., Charlotte, N. C.; Dr. Delia Dixon Carrol, Raleigh, N. C.; Miss Lois Toomer, R. N., Wilmington, N. C.; Miss Maria P. Allen, Morganton, N. C.; Dr. Thompson, Fraser, Asheville, N. C.

On Local Entertainment.

Dr. L. B. McBrayer, Chairman, Sanatorium, N. C.

Reception Committee—Dr. A. McNiel Blair, Chairman; Drs. J. W. Achorn, J. F. Davis, J. H. Matthews, A. A. McDonald, A. H. McLeod, A. M. McLeod, W. C. Mudgett, H. B. Shields, E. M. Street, W. P. Street, Fred Thompson, M. W. Marr, A. McN. Blue, L. B. McBrayer.

Committee to Arrange Afternoon Session of Health Officers' Association, Farm Life School, Provide Automobiles—Dr. W. C. Mudgett, Chairman; Drs. G. M. McLeod, A. McN. Blue, M. W. Marr, A. A. McDonald.

Committee to Arrange for Visits to Sanatorium and Provide Automobiles—Dr. P. P. McCain, Chairman; Drs. J. L. Spruill, H. E. Bowman, A. H. McLeod, M. E. Street.

Reception Committee at Aberdeen—Drs. A. H. McLeod, H. E. Bowman.

Ladies' Entertainment Committee—Mrs. A. McNiel Blair, Chairman; Mrs. W. C. Mudgett, L. B. McBrayer, J. L. Spruill, Leonard Tufts, J. R. Page, Gilbert McLeod, P. P. McCain, T. B. Tyson, H. F. Seawell, H. E. Bowman, A. A. McDonald, W. P. Sweet, John W. Achorn, W. N. Hutt.

Tuesday, April 15, 9:30 A. M.—Opening Exercises, Carolina Auditorium. General Session.

Call to order: Dr. L. B. McBrayer, Chairman, Committee on Arrangements, Sanatorium, N. C.

Prayer: Dr. H. E. Foss, Southern Pines, N. C.

Addresses of Welcome: Mr. Leonard Tufts, Pinehurst, N. C.; Hon. H. F. Seawell, Carthage, N. C.; Dr. H. E. Bowan, Aberdeen, N. C.

Response: Dr. J. T. Burrus, High Point, N. C.

President's Address: Dr. Cyrus Thompson, Jacksonville, N. C.

Report of Committee on Arrangements.

Announcements.

Tuesday, April 15, 2:30 P. M., Carolina Hotel Card Room.

Meeting of House of Delegates.

Subsequent meetings at same place; time fixed by House of Delegates.

Tuesday Evening, April 15, 8:00 P. M., Carolina Hotel Auditorium.

His Excellency, the Governor of North Carolina, Hon. T. W. Bickett.

What our Government is doing in Vocational Therapy and the Rehabilitation of the Tuberculous Soldier at Oteen, Captain North, U. S. A., General Hospital No. 19.

The Disabled Soldier: Lessons from Canada's Experience (with moving pictures)—Prof. T. B. Kidner, Special Advisor to the Federal Board for Vocational Education, Washington, D. C.

Wednesday, April 16, 12:00 M.

Conjoint session of the Medical Society of the State of North Carolina and the North Carolina State Board of Health.

Members of the State Board of Health.

President, Dr. J. Howell Way, Waynesville, N. C.; Dr. Richard H. Lewis, Raleigh, N. C.; Col. J. L. Ludlow, Winston-Salem, N. C.; Dr. E. C. Register, Charlotte, N. C.; Dr. Thomas E. Anderson, Statesville, N. C.; Dr. Chas. O'H. Laughinghouse, Greenville, N. C.; Dr. Edward J. Wood, Wilmington, N. C.; Dr. F. R. Harris, Henderson, N. C.; Dr. Cyrus Thompson, Jacksonville, N. C.

Executive Staff State Board of Health.

Secretary-Treasurer—Dr. W. S. Rankin, Raleigh, N. C.

Director State Laboratory of Hygiene—Dr. C. A. Shore, Raleigh, N. C.

Chief Bureau of Vital Statistics—Dr. J. R. Gordon, Raleigh, N. C.

Chief Bureau of Tuberculosis and Superintendent of State Sanatorium—Dr. L. B. McBrayer, Sanatorium, N. C.

Chief Bureau of Rural Sanitation—Dr. Geo. M. Cooper, Raleigh, N. C.

Chief Bureau of Infant Hygiene—Mrs. Kate Brew Vaughn, Raleigh, N. C.

Chief Bureau of Epidemiology—Dr. A. McR. Crouch, Raleigh, N. C.

Order of Business.

Report of work accomplished and recommendations.

Discussions.

New Business.

Adjournment.

Wednesday Afternoon, April 16, 3:00 P. M.

Horse Races. Compliments Mr. Leonard Tufts. Admission by badge.

5:00 P. M.

Moving Pictures—"At the End of the Road." Moving Picture Theatre. Dr. J. A. Keiger, U. S. P. H. S., Raleigh, N. C.

Wednesday Evening, April 16, 8:00 P. M., Carolina Parlors.

"What We Have Learned From the War." Lt. Col. Chas. O'H. Laughinghouse, Greenville, N. C.

"Experiences With the Colors." Maj. M. H. Fletcher, Asheville, N. C.; Capt. Benj. K. Hays, Oteen, N. C.; Lt. Com. R. D. Jones, U. S. N., New Bern, N. C.. Remarks by others.

Commitee on Obituaries: Dr. H. H. Dodson, Chairman, Greensboro, N. C.; Dr. T. C. Johnson, Lumberton, N. C.; Dr. L. N. Glenn, Gastonia, N. C.

Remarks by the Chairman, Dr. H. H. Dodson.

"Our Heroic Dead."

With the Colors—Dr. A. J. Crowell, Charlotte, N. C.

From Influenza: Dr. W. M. Jones, Greensboro, N. C.

Other Eulogies.

Wednesday Evening, April 16, 9:30 P. M.

Convention Ball.

Thursday, April 17, 11:00 A. M., Carolina Auditorium.

Report of House of Delegates.

Installation of Officers.

Resolutions.

Adjournment.

Tuesday, April 15, 11:00 A. M., Carolina Auditorium.

SECTION ON PRACTICE OF MEDICINE.

Dr. E. J. Wood, Chairman, Wilmington, N. C.

SECTION ON ANATOMY, MATERIA MEDICA AND THERAPEUTICS.

Dr. Wm. deB. MacNider, Chairman, Chapel Hill, N. C.

The Acute Changes in the Kidney in Chronic Nephritis Which Are Followed by an Anuria: The Prevention of Acute Changes—Dr. Wm. deB. MacNider, Chapel Hill, N. C.

The Essential Facts in Nutrition: A Consideration of the Essential Substances in Food—Dr. Edward J. Wood, Wilmington, N. C.

Symposium on the Treatment of Influenzal Broncho-pneumonia with the Serum of a Convalescent:

The Clinical Aspects—Dr. J. P. Munroe, Charlotte, N. C.

The Technic of the Procedure—Dr. H. P. Barret, Charlotte, N. C.

The Rationale of the Treatment—Dr. Otho B. Ross, Charlotte.

Pellagra—Dr. K. G. Averitt, Cedar Creek, N. C.

The Treatment of Cardio-Vascular-Renal Disease in Country Practice—Dr. T. C. Johnson, Lumberton, N. C.

The Importance of a Routine Study of the Feces—Dr. L. E. Farthing, Pittsboro, N. C.

A Study of a Case of Acute Nephritis Following Influenza—Dr. J. W. Freeman.

Bacterial Vaccine—Dr. C. A. Shore, State Laboratory of Hygiene, Raleigh, N. C.

The Treatment of Cerebrospinal Syphilis—Dr. C. M. Byrnes, Baltimore, Md.

The X-Ray in the Diagnosis of Tuberculosis—Capt. H. Kennon Dunham, Oteen, N. C.

Tuesday, April 15, 11:00 A. M., Carolina Parlors.

SECTION ON SURGERY.

Dr. L. N. Glenn, Chairman, Gastonia, N. C.

Radical Correction of Club-Foot—Dr. L. N. Glenn, Gastonia, N. C.

The Barrel-stave Splint in Fracture of the Clavicle—Dr. Hubert Royster, Raleigh, N. C.

Plastic and Oral Surgery—Dr. C. W. Banner, Greensboro, N. C.

Treatment of Fractures of the Pelvis, With Report of Cases—Dr. E. B. Glenn, Asheville, N. C.

The Importance of After Treatment to Prevent Recurrence of Stone Following Nephrolithotomy—Drs. A. J. Crowell and Raymond Thompson, Charlotte, N. C.

Empyema in the Army—Lieut. Franklin A. Stevens, Washington, D. C.

A Satisfactory Traction Splint for the Lower Limb—Dr. E. T. Dickinson, Wilson, N. C.

Tuesday, April 15, 3:00 P. M. Carolina Auditorium.

SECTION ON OBSTETRICS.

Dr. J. R. Alexander, Chairman, Charlotte, N. C.

Treatment of Some of the Emergencies of Obstetrics—Dr. J. R. Alexander, Charlotte, N. C.

Accidents During Pregnancy—Dr. J. B. Whittington, Winston-Salem, N. C.

Medical Agencies in Labor—Dr. Annie L. Alexander, Charlotte, N. C.

Meddlesome Obstetrics—Dr. Reid Patterson, Charlotte, N. C.

There is No Mid-Wifery Problem—Dr. Carroll Wiggins, Winston-Salem, N. C.

Criminal Abortion—Dr. Oren Moore, Charlotte, N. C.

Some Scattering Remarks on Obstetrics, With Report of Three Cases of Rupture of Uterus—Dr. N. C. Hunter, Laurinburg, N. C.

Some Complications Encountered in the Obstetrical Practice in the Country—Dr. J. W. Halford, Lillington, N. C.

Pituitary Extract in the Management of Labor—Dr. Thermon D. Kitchin, Wake Forest, N. C.

Tuesday Afternoon, April 15, 3:00 P. M., Carolina Parlors.

SECTION ON GYNECOLOGY.

Dr. H. W. McCain, Chairman, High Point, N. C.

A Consideration of Some Problems in Diseases of the Cervix Uteri—Dr. Alfred Heineberg, Philadelphia, Pa.

Caesarian Section vs. Any Other Method of Treating Anti-partum Eclampsia—Dr. D. A. Stanton, High Point, N. C.

Report of Case of Obstetrics Following Removal of Large Fibroid of Uterus—Dr. J. A. Williams, Greensboro, N. C.

Subject Unannounced—Dr. I. T. Mann, High Point, N. C.

Subject Unannounced—Dr. Ben. F. Royal, Morehead City, N. C.

Wednesday, April 16, 9:00 P. M. Carolina Ball Room.

SECTION ON PUBLIC HEALTH AND EDUCATION.

Dr. D. E. Sevier, Chairman, Asheville, N. C.

1. Influenza Experience Gained in Epidemic in Asheville—Dr. C. V. Reynolds, Asheville, N. C.

2. Milk Supply for Small Cities, Illustrated with Lantern Slides—Dr. J. M. McCormack, Asheville, N. C.

3. The Fundamental Principles of Public Health Nursing—Miss Rose M. Ehrenfeld, State Director of Public Health Nursing, Sanatorium, N. C.

4. (a) Unification of Nursing Activities Under Health Departments; (b) Outline of a Plan for the Education of Home Nurses—Dr. Chas. E. Low, Health Officer, Wilmington, N. C.

(c) The Milk Station; (d) Baby Clinic—Miss Columbia Munds, Supervisor of Nurses, Wilmington, N. C.

5. (a) The Importance of the Super-

vising Nurse and Her Qualifications; (b) The Tuberculosis Clinic—Dr. C. C. Hudson, Health Officer, Charlotte, N. C.

6. The Tuberculosis Clinic in the County Health Department: (a)—Dr. A. J. Warren, Health Officer, Salisbury, N. C.; (b) Dr. L. J. Smith, Health Officer, Wilson, N. C.

7. The Public Health Nurse Specializing in School Inspections—Miss Nora Pratt, Bureau of School Inspections, State Board of Health, Raleigh, N. C.

8. 5:00 p. m.—Moving Pictures—"At the End of the Road." Moving Picture Theatre.—Dr. J. A. Keiger, U. S. P. H. S., Raleigh, N. C.

Wednesday, April 16, 9:00 A. M.
Carolina Card Room.

SECTION ON EYE, EAR, NOSE AND THROAT.

Dr. A. M. Whisnant, Chairman, Charlotte, N. C.

The Eye as an Aid in Diagnosis and Localization of Intra-cranial Lesions—Dr. Louis N. West, Raleigh, N. C.

Infections of the Nasal Accessory Sinuses (Observation in Recent Cases)—Major John W. MacConnell, Davidson, N. C.

Treatment of Dycryocystitis—Dr. J. G. Johnson, Charoltte, N. C.

Subject Unannounced—Dr. E. S. Warlick, Morganton, N. C.

Report of Two Interesting Oesophageal Cases—Dr. John B. Wright, Raleigh, N. C.

Club Operations for School Children—Dr. G. M. Cooper, Raleigh, N. C.

Intubation—A Different Way—Dr. O. C. Daniels, Goldsboro, N. C.

Thursday, April 17, 9:00 A. M.
Carolina Auditorium.

SECTION ON PATHOLOGY, PHYSIOLOGY, BACTERIOLOGY AND CHEMISTRY.

Dr. S. A. Stevens, Chairman, Monroe, N. C.

Corpus Luteum: Its Use in the Treatment of Some Disorders of the Sexual Organs—Dr. S. A. Stevens, Monroe, N. C.

Chemistry: Its Neglect by and Importance to the Physician—Dr. J. W. Neal, Monroe, N. C.

Treatment of Syphilis With Mercury: Its Mode of Absorption and Excretion—Dr. J. A. Elliott, Charlotte, N. C.

Hyper-and Hypothyroidism—Dr. R. H. Garren, Monroe, N. C.

Physiology of the Internal Ear—Dr. C. N. Peeler, Charlotte, N. C.

SECTION ON PEDIATRICS.

Dr. Charles Roberson, Chairman, Greensboro, N. C.

North Carolina Health Officers' Association, Ninth Annual Session, Pinehurst, Monday, April 14, 1919.

Dr. J. R. McCracken, President, Waynesville, N. C.

Dr. E. F. Long, Vice-President, Lexington, N. C.

Dr. G. M. Cooper, Secretary-Treasurer, Raleigh, N. C.

PROGRAM.

9:30 A. M.

1. Prayer—Dr. T. F. Wickliffe, Kinston, N. C.

2. President's Annual Address—Dr. J. R. McCracken, Waynesville, N. C.

3. Report of Secretary-Treasurer—Dr. G. M. Cooper, Raleigh, N. C.

4. Appointment of:
   (a) Auditing Committee.
   (b) Committee on Resolutions.
   (c) Other Committees.

5. Veneareal Disease Work in North Carolina—Dr. Jas. A. Keiger, U. S. Public Health Service.

6. Arrangements made by Guilford County for Furnishing Its Citizens Diphtheria Anti-Toxin—Dr. Wm. M. Jones, Greensboro, N. C.

7. The Control of Diphtheria—Dr. W. S. Rankin, Secretary, North Carolina State Board of Health, Raleigh, N. C.

8. Prevention of Degenerative Diseases—Dr. L. J. Smith, Wilson, N. C.

9. Orthopedic Defects From Point of View of the Health Official—Dr. L. N. Glenn, Gastonia, N. C.

10. Discussion.

2:00 P. M.

Automobile transportation from Pinehurst to Eureka Farm Life School and James McConnell Hospital, where afternoon session will be held at 3:00 p. m.

Writen Reports not exceeding 500 words (longer reports will not be heard)—By city and county health officials. Reports will be called alphabetically by counties.

8:00 P. M.
Hotel Auditorium, Pinehurst.

1. Results of Extra-Cantonment Work of Camp Polk—Capt. C. E. Waller, Past Assistant Surgeon U. S. Public Health Service.

2. The Dog in the Manger: A Modern Fable—Dr. B. E. Washburn, International Health Board, Raleigh, N. C.

3. Overseas Observations Regarding Public Health—Lt. Col. Chas. O'H. Laughinghouse, Greenville, N. C.

4. Round Table Discussion on Local Health Problems.
5. Report of Committees.
6. Adoption of Resolutions.
7. Election of Officers.
8. Adjournment.

Wednesday, April 16, 10:00 A. M.
Carolina Parlors.

FIRST ANNUAL SESSION NORTH CAROLINA HOSPITAL ASSOCIATION.

President—Dr. J. F. Highsmith, Fayetteville, N. C.

Vice-President—Dr. E. B. Glenn, Asheville, N. C.

Vice-President—Dr. L. A. Crowell, Lincolnton, N. C.

Vice-President—Miss C. E. Blount, R. N., Kinston, N. C.

Secretary-Treasurer—Dr. John Q. Myers, Charlotte, N. C.

Executive Committee: Dr. L. B. McBrayer, Sanatorium, N. C.; Dr. D. T. Tayloe, Washington, N. C.; Miss Edith M. Redwine, R. N., Asheville, N. C.

Wednesday, April 16, 10:00 A. M.

President's Address—Dr. J. F. Highsmith, Fayetteville, N. C.

Efficiency in the Small Hospital—Miss Edith M. Redwine, R. N., Asheville, N. C.

The nIterne Problems of the Small Hospital—Dr. E. S. Boice, Rocky Mount, N. C.

The Hospital Kitchen—Miss Lela H. Sumner.

Dietetics—Miss Owen, Fayetteville, N. C.

Iritis and Cyclitis in Dysentery.—Maxwell and Kiep (British Jour. Ophthal), observed 6 cases all from the Mediterranean area, the subjects of infection with Bacillus dysenteriae (Shiga), who developed iritis or cyclitis. They conclude that patients suffering from an infection by this bacillus may ocasionally develop anterior uveitis as a result of this infection, as pointed out by Morax. The ocular infection may or may not be accompanied by articular manifestations. These affections would appear to ocur most frequently about a month after the first signs of involvement of the bowel, but may occur as early as the twelfth day. The articuo-ocular syndrome corresponds exactly to that occuring in another infection of a mucous tract, viz., gonorrhea, as pointed out by Garrod.

BOOK NOTICES

"The Web," a novel by Frederic Arnold Kummer. Price $1.50. The Century Company, New York.

The author of this thrilling novel founded on fact, was fortunate in being able to obtain information concerning certain work carried out by the secret service authorities of Great Britain, which work resulted in a great naval victory. One cannot fail to be stirred by the knowledge that the actual combat at sea resulted from the efforts of men and women, enmeshed in a web of romance and intrigue, many thousands of miles removed from the scene of the battle, unseen figures in drama so astonishing in its nature, so brilliant in its results, that one is again reminded of the old adage that "truth is stranger than fiction." Courage, love, faith and devotion to duty of a high order, all were necessary, that these results might be secured, and it will surprise no one to learn that such qualities were possessed in a superlative degree, by an American newspaper correspondent.

This is a spy story with international complications. The back-ground is the War of 1914-1918. It is also a story of thrilling adventure, of intricate and baffling intrigue, of a man and woman who gave their all that the cause to which they were pledged might succeed.

"The Chaos in Europe." A consideration of the political destruction that has taken place in Russia and Elsewhere and of the international policies of America by Frederick Moore, author of "The Balkan Trail" and "The Passing of Morocco." With an introduction by Charles W. Eliot, LL. D., President Emeritus, Harvard University. Price $1.50. G. P. Putman's sons, New York and oLndon.

The author has had a rare experience as a correspondent, qualifying him to a remarkabl edegree to describe the present military and political situation. His suggestions referring to the future foreign policy of the United States merit the careful attention of leaders of opinion.

Theodore Roosevelt writes: "Mr. Frederick Moore has made a real study of Russia and is an exceptionally clear sighted and fearless man."

This small book, entitled "The Chaos in Europe"—the title by no means represents the scope of the treatise—is good reading for every American who desires to understand the complicated political

and commercial situation in Russia, the Balkan States, and the Near and Far East which four years and a quarter of giant war have created, and the objects to which the efforts of the free nations that have overcome Germany should be steadily directed. The book appears in the nick of time—when the Peace Conference is about to enter on its long debates.

"Navala Heroes of Today," by Francis A. Collins, author of "The Fighting Engineers," etc., 12 mo., 256 pages. Illustrated. Price $1.50 at all book stores published by The Century Co., 353 Fourth Ave., New York City.

The American Navy is living up to its best traditions in the war with Germany. Dangers are being faced and problems solved which bring new tests of courage. Almost daily the Government rewards some man for "conspicuous bravery." The adventures of the Naval air pilots and observers, the fearlessness of the armed guards aboard the merchant ships, the thrilling life on the scouts and destroyers in battling against the submarines add a new and fascinating chapter to the history of our Navy. Mr. Collins has collected the details of upwards of fifty of these exciting sea tales and presented them in the attractive style made familiar by his earlier books. It is a record in which every American may take just pride. Few sea stories of fiction stir the blood as do these records of actual achievement. The book is interestingly illustrated from photographs.

"The Elementary Nervous System," by G. H. Parker, Sc. D., Professor of Zoology, Harvard University, 53 illustrations. Price $2.50. Philadelphia and London, J. B. Lippincott Company.

The dependence of human affairs upon the nervous system of man is so absolute that it was inevitable, as soon as this relation was understood, that the activities of the simpler animals should be interpreted as though these creatures were miniature human beings. That such interpretation was carried far beyond its legitimate bounds, even by the scientifically trained, is now admitted on almost all sides, but it is no easy or simple task to ascribe to this movement its proper bounds. That these bounds are vastly more restricted than has usually been supposed is certain. An approach to a clearer understanding of what they are is assured through the application of experimental and quantitative methods to the questions concerned rather than by a continuation of the older more purely observational procedure. It is from this standpoint that an attempt has been made in this volume to portray the elementary nervous system as it exists in the simpler animals and in the simpler parts of the more complex forms. It is believed that this treatment of the subject may help in the solution of the general problem by removing once and for all some of the old misunderstandings concerning the nervous system and by inviting the student's attention to new methods of attack.

The illustrations are good and will no doubt aid the reader materially in interpreting the text. The book is invaluable to the scholar who is interested along this line of thought.

"David and Jonathan," by E. Temple Thurston, author of "The City of Beautiful Nonsense," etc. Price $1.50. G. P. Putman's Sons, New York and London.

The two friends—so different in temperament and physique, but one in understanding—last to leave the burning ship, were finally thrown half dead on burning American sands. Six days later a ship's boat plunged through the breakers containing six bodies, apparently dead from hunder and thirst—but one breathed, a woman.

Out of this situation the author weaves a story as whimsical as his "City of Beautiful Nonsense," but thrilling, making possible the most fantastic improbabilities.

"Clinical Microscopy and Chemistry," by F. A. McJunkin, M. D., Professor of Pathology in the Marquette University School of Medicine; formerly an Assistant in the Pathological Laboratory of the Boston City Hospital. Octavo volume of 470 pages with 131 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth $3.50. W. B. Saunders Co., Philadelphia, London.

In Medical curricula there is little uniformity in regard to the place and scope of the subject comprising the common laboratory methods employed by the physician in the practice of medicine. That such a course of study is desirable in order to bring to the attention of the student the clinical application of chemical and biologic methods seems certain; and, since the question is largely one of selecting and applying methods from a clinical standpoint, the subject is usually

placed under the direction of an instructor with training in clinical medicine. There appears to be a definite indication for the presentation of this subject from the laboratory point of view, for the instructor usually wishes to supply the clinical interpretations and discussions. This is attempted in this volume, and special emphasis is given the chemical, bacteriologic, serologic and pathologic methods, while lengthy clinical descriptions which are readily accessible in textbooks on clinical medicine are omitted.

Throughout the book emphasis is placed on the relationship between the materials commonly examined by the clinician and the body tissues. Examples of this connection are seen in the relationship between the blood cells and the tissues from which they arise, viz.: the bone-marrow, lymphoid tissue and vascular endothelium, between the sputum; between urine sediment and the lesions of the kideny and the lower genito-urinary tract, and so on. Aside from the close association of clinical medicine and postmortem examinations, the introduction of the chapter on histologic and autopsy technic seems advisable in order to correlate the normal nd pathologic tissues with the materials commonly made the subject of clinical laboratory examination.

The 131 illustrations have been carefully selected and they are appropriate in every way. Dr. McJunkin is an attractive writer and the conclusions arrived at in this book are thoroughly logical.

Radio-Diagnosis of Pleuro-Pulmonary Affections, by F. Barjon, translated by James Albert Honeij, M. D., assistant Professor of Medicine in Charge of Radiology, Yale School of Medicine.

Most timely and of immediate value to the medical profession is Dr. Honeij's translation of Barjon's important work. The volume sets forth in a concise and clear manner the interrpetation of the shaows in various chest affections, emphasizing the scope of oRentgenological diagnosis and the importance of co-operation between the clinician and the Roentgenologist and the value of supplementing with laboratory findings (serum reaction, tuberculin test, and Wassermann) the radioscope findings.

Beginning with an exposition of the radioscope examination of the normal chest, the author proceeds with a discussion of pleurisy pneumothorax, foreign bodies in the bronchi, bronchial affections, tracheo-bronchial adenopathy, vascular processes, acute infectious pulmonary processes, chronic pulmonary processes, pulmonary tuberculosis and pulmonary tumors.

The book contains a chapter of particular interest at this time on penetrating wounds of the thorax by projectiles.

Dr. Honeij is a fine writer and a well known teacher and has given the medical profession in this volume a book of great value. It gives us pleasure to recommend it.

Price $2.50. Yale University Press, New Haven, 120 College St., New York, 280 Madison Ave.

"Progressive Medicine" a quarterly digest of advances, discoveries and improvements in the medical and surgical sciences by Hobart Amory Hare, M. D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M. D., instructor in Therapeutics, Jefferson Medical College, Philadelphia, March 1st, 1919. Owners and publishers, Lea & Febiger, New York and Philadelphia. Six dollars per annum.

United States Manual Medical Bulletin published for the information of the Medical Department of the Service. Issued by the Bureau of Medicine and gery Navy Department division of publications. Report on Medical and Surgical Developments of the War by William Seaman Bainbridge, Lieutenant Commander, medical corps United States Naval Reserve Force. Washington oGvernment Printing Office January, 1919.

"War Medicine," published monthly by the American Red Cross Society in France for the Medical Officers of the American Expeditionary Forces. Editorial Offices. 2, place de Rivoli, Paris, Rooms 422-425.

"Quarterly Medical Clinics," a series of consecutive clinical demonstrations and lectures by Frank Smithies, M. D., at Augustana Hospital, Chicago. Vol. 1, No. 1, published by Medicine and Surgery Publishing Co., Inc., Metropolitan Bldg., St. Louis.

We have examined this new Quarterly Medical Clinics and find it is full of interesting and valuable matter. The illustrations are fine and quite numerous enough to illustrate the text. Dr. Smithies is a well known teacher and a good lecturer and no doubt he will be successful in editing these forth coming volumes.

"The Tin Soldier," by Temple Bailey, author of "Contrary Mary" "Mistress Anne," "Glory of Youth," etc. Illustrated by F. Vaux Wilson. Price $1.50. The Penn Publishing Co., Philadelphia.

This is an interesting love story in which friendship, devotion and love conflicts with patriotism. While this story is interesting from beginning to end no doubt the picture painted here will apply with equal force to thousands of other experiences and circumstances. The volume gives a beautiful picture of what duyt should be even if it is performed in an unusual way and not in accordance with the usual methods.

The Vibrating Sensation in the Differential Diagnosis of Affections of the Spinal Cord and Peripheral Nerves.— Williamson, in The London Lancet, calls attention to the value of the vibrating sensation in the differential diagnosis of affections of the spinal cord and peripheral nerves from hysteria, functional diseases and malingering.

He tests the vibrating sensation by a large vibrating tuning-fork, the foot of which is placed on a subcutaneous bony surface, such as the malleoli, the inner surface of the tibia in the leg, the anterior superior iliac spine, the styloid process of the ulna at the wrist, the sternum, etc.

Loss of vibrating sensation is often one of the earliest signs of sensory affection in lesions of the spinal cord. It is often lost before other forms of sensation are affected.

In the differential diagnosis of organic paraplegia from hysteria, functional disease, and malingering, he calls attention to the following point. In any case of paralysis or paresis of the legs, if the vibrating sensation is lost, while other forms of sensation are recognized, and the patient persists in this statement in spite of suggestions to the contrary, malingering or hysteria is very improbable. In malingering or hysteria, if sensation is affected, the vibrating sensation and other forms of sensation will usually be lost together.

Vibrating sensation has been lost in cases of spinal disease which have come under the author's observation that were probably due to combined pos erolateral degeneration and lost at a very early stage before other forms of sensation had been lost. He quotes the case of a man called for military service in 1917. The patient stated that he considered himself unfitted for military service because of a weakness or heaviness in his legs and slight unsteadiness in walking could have been attributed to neurasthenia or malingering but for two signs. The knee-jerks were normal; no ankle clonus could be obtained; and the only definite sign of organic disease was the loss of the vibrating sensation on the legs and the change in the plantar reflex. Six months later he showed well-marked signs of organic disease.

Williamson calls attention to the value of testing the vibrating sensation in the numerous cases of lesions of the cord and peripheral nerves now coming under observation in military practice.

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PRESIDENT'S ADDRESS—THE ART OF LIVING.

By Dr. Cyrus Thompson, Jacksonville, N. C.

We are met here in an atmosphere far different from that which surrounded us in 1917 and 1918, but at a time none the less pregnant with perilous and unsolved problems. These past years were years of unparalleled storm and stress and anxious tension. They were years of phenomenal waste and stupendous destruction of wealth and happiness and human life. I fain would hope that such destruction is beginning to find its perpetual end, and that we are now about to enter upon a period of beneficent reconstruction such as the world has never known.

In 1917, our country was just entering the world conflict, which though 3,000 miles away yet swirled about us like a cruel vortex, but into which every sense of right and justice and safety, every sentiment of honor and humanity and wise selfishness, impelled us.

In 1918, the prime and pride of young American manhood was rushing overseas to the wavering lines of carnage in France; and the flower of our profession were going or chafing to go with them for the necessary service which they might render to our own and the allied armies. No prophet could foretell when the mighty conflict would end, nor into what straits we might come. The Nation's heart like flint was set from tenderness to endure, whatever the sacrifice and whatever the length of it—with equal courage for duty and faith as to the outcome.

In 1919, the storm is lulled as if tired of its own fury, the stress is slackened, the slaughter is stayed, the weary and wounded world takes some sort of resting spell; our dead are asleep in friendly soil, and the living are coming back home again. Sorrow sad-eyed slumbers in the breast of gratitude, and we are jubilant for the victory which the Judge of all the earth through us in fulfilment of our destiny hath thus far given unto his people. The tension of our anxiety is gone, and we live in the calm of patient courage, the courage that is born of reverent faith and dreams of a divine purpose the fruition of which needs our human help; the faithful courage that senses and stands foursquare to the measurelsess obligations of quieter sort which bind and energize good men in a time of peace.

For the problems of peace, while less urgent it may be and slower of solution, are no less serious than the problems of war; and the solution of them demands no less conviction, no less fortitude and zeal and wisdom of leadership.

The art of living is the finest of all the fine arts. It is also the art which both individuals and nations of men are slowest to learn. But in all nations individuals are readier to learn it than are nations themselves. These good men are the salt of the earth. You may find civilized men in every nation in the world, but nowhere in the world may you find a civilized nation. In every nation you may find individuals honest and neighborly to individuals of any other nation, but an honest and neighborly nation is as yet an unknown social product. If every man in a nation were civilized, the nation yet would not be civil. Here lies man's social paradox—the whole is not equal to the sum of its parts; and this is the social problem that must be solved before wars shall end and an enduring peace have benign sway over all the earth. The individual loves the plow-share, but the nation does not farm; the individual loves his pruning hook, but the nation has no orchard or garden. The nations do their work with swords and spears and lying tongues.

Men and nations everywhere increase in knowledge, and men may grow in grace; but in wisdom everywhere nations fall down as fools. They advance in all sciences and all arts but one; and we call it progress and boast of achievement. But lacking a knowledge of the honest and peaceable art of living, this boasted progress of the world is but the fine road to dissolution. Who built the pyramids of Egypt? We do not know who nor how. But we do know that ignorance of this fundamental wisdom is the teeming mother of misery and war and waste, the swift helpmeet of destruction and death. So runs the course of human history.

The boasted Kultur of Germany and the Kaiser, who madly himself always took precedence of God—what availed it for the life of Germany or the betterment of the world? Surely it was knowledge

*Delivered at Pinehurst before the North Carolina Medical Society, April 15, 1919.

but it was not wisdom. What avail now her high seats of learning which were as Meccas for ambitious students the world over? She held no art or science of value but as a means to rob and strangle the freedom of her neighbors and make her mistress of the world. Her way was the Gentile way. She now knows that God takes precedence of the Kaiser, and that the wages of sin is death. Fortunately for the world she is receiving the honest wages of her sin. A broken and dismembered empire—her cruel millions of a year ago may still have about them medals struck upon the sinking of the Lusitania; her haughty leaders of a year ago may remember that they would have no peace but a German peace; but they are now suppliants begging us for food to keep them living in remembrance of their sin. Her ruthless master fled his throne, Gott-forsaken as a matter of course; he now saws wood and says nothing in fearful exile. In her ignorance, Germany went up against impregnable law; least of all nations had she learned the fine art of national living.

But this picture is not without a touch of pathos: I would love to think what Germany with the heart of Goethe and Schiller and Heine might have been for the happy life of the world.

England, on the other hand, lover of liberty and mother of self-governing peoples, lives on an undivided empire; France, loving freedom and social justice among her brave people, desiring only her own, lives on a proud republic; while our own great commonwealth, honest and great and wise, fathers the possibility of a civilized world and leads the way to enduring peace. Turn for a moment to the fair face of our own beloved country—fair as queen Esther to look upon; lover of liberty and self-determination and peace; bold and swift in righteous combat; preserver of civilization; generous of heart and friend of every struggling, of every tolerable people. In her budding prime America knows for herself and for the world the art of living as no other people ever knew it.

Without our America, what would the faltering nations have done last year? And what would the troubled world do now without the bountiful and guiding hand of America? I stand here in the sight of things and say that our fathers who made the Declaration of Independence and won the revolution against what they call the tyranny of a German King on an English throne knew not what broad foundation they were laying nor for what ultimate purpose; but the Eye that sleeps not nor slumbers, He knew and made provident use of these "irresponsible tools of history."

And although I may not on election day cast my ballot with the majority of you, yet have I no sort of hesitation in saying that the President of these free States has a vision of world righteousness and peace, of the fine art of national living, such as never before informed and animated the head of a great and purposeful people. And so, as a genuine American, I am righteously proud of him in his righteous purpose to teach righteousness to the nations, to bring disorder and wars and their waste and misery to an end, to establish a just, constructive and during peace throughout the world—this strong jawed American school-teacher in France, whom all the nations look up to. Wilhelm was a savor of death unto death, a vessel unto dishonor; Wilson, embodiment of the American spirit, a savor of life unto life, a vessel unto honor, meet for the Master's service. I bid him Godspeed, therefore, in the right formation of a righteous League of Nations for the rehabilitation of this wasted earth, and the prevention of the destruction and misery and death incident upon social disorder and war.

I speak of social disorder. When we entered into this war, whatever our personal provocation, we entered with the altruistic purpose to make the world safe for democracy. This slogan roused our generous patriotism and woke a vibrant chord in the sentimental and humane heart of America. As the enemy of democracy, we saw only the increasing autocracy of the central powers. Our democratic armies made glad war upon brutal autocracy. The dangers of autocratic aggression vanished with the flight of the Kaiser and the signing of the armistice. That enemy of democracy bravely met and vanquished, the democratic peoples of the earth with joy celebrated their victory. But another danger looms large in Europe, and its mutterings are heard even in our own land. Newborn of disorder there lives and grows a monstrous thing more dangerous to democracy than autocracy ever was. Autocracy is dead, but Bolshevism threatening the world drops a stenching fly into the fragrant ointment pot of victory.

This gives the faithful pause and makes us lift anew our eyes unto the everlasting hills whence cometh our strength. When we were looking for the increasing day of benign and orderly democracy the world

over, we catch sight of the mad face of social chaos and the gloom of night. Better a thousand times the iron hand of autocracy than the madness of Bolshevism. For any form of stable government is better than none. Authority and order are essentials in all good government.

Accustomed to law and order and smiling peace for fifty years, most of us have accepted orderly government as a natural human thing. It never occurred to us that orderly government, this first step in the art of community living, is a most unnatural thing. Indeed, I know nothing more mysterious than this. The mystery of Godliness may be great; but the mystery of individual Godliness may not be compared with the mystery of a 100 millions of human beings living daily an efficient and peaceful organism. Let but authority fail in such an organism: it dissolves explosively into riotous units, and the units cry out "Every man for himself and the devil take the foremost and the best." Destruction and devastation harry the land. The process is not long: the unchained ignorance of a day undoes the wisdom of a thousand years.

All government of whatever form, let it be autocratic, aristocratic, or democratic, lives by the bread of authority for the preservation of order. Without authority there can be no conception of a common weal. Human justice, welfare and progress are predicated upon stable government fixed in authority and preserving order to achieve any humane purpose.

In an autocracy, this authority is vested in and exercised by a single head: in a democracy, the authority is vested in the governed and exercised by the few. Founded upon the doctrine of equality of right and of obligation, democracy expresses its authority through the leadership of men whom it chooses for a purpose. Democracies express themselves as aristocracies; and in time of stress they approach autocracy in action. But such autocracy is temporary and exercised for the common good; the good uncomplaining are conscious of the necessity and the wisdom of it. Authority is maintained and order is preserved for the common good. When authority fails, order is gone and anarchy revels in social dissolution and the destruction of the common weal.

If autocracy is democracy gone to seed, Bolshevism is democracy gone mad. This madness now threatens the world—rampant or crouching, the world over, it denies all democracy, all leadership, all authority, all common right and obligation, all orderly government. It is social dissolution into helpless elements that have neither heart nor head to compass their own safety and peace, to achieve in a fair earth their obscure desires. The Russia of the Czar was more tolerable than the Russia of Lenine and Trotsky; the Germany of Prussia was better for the world than the Germany which Karl Liebknecht and Rosa Luxemburg would have made.

The world, therefore, is not yet made "safe for democracy," and the work of the good who would teach men and nations the fine art of living is by no means done.

But some one may ask why I present considerations of this sort before a body of medical men—why not present them rather before an audience of laymen? I find no fault with your question, but I knew to begin with that my address would be out of line, because the times themselves are sadly out of joint and I am living in them. Without apology, therefore, I answer that first of all a physician must be a man! If you are only a doctor, you are a very small thing. But if you are a man first and a doctor also, I may then congratulate you upon your greatness. Fundamental considerations of living must concern all good men, all thoughtful men, all constructive men; all men especially who by reason of education and position are responsible for the character of the communities in which they live, and so for the temperament and complexion and peace and upward lift of the world. The physician first of all must be a man to whom nothing human is foreign; and, indeed, he has no right to be a physician at all, if within the sphere of his influence he is not abreast of the foremost in serious thought and wholesome action.

From these thoughts which range largely abroad, but which nevertheless seize hold of us as they grip all serious men, let us turn homeward to quieter things which should appeal to physicians first of all. Living in peace, let us labor helpfully our little while under our own blessed vine and fig tree. For it may be that, if we do not tithe mint and anise and cummin in forgetfulness of the weightier matters of the law, we sometimes, in our efforts to compass what we call a living, lose sight of fundamental things and fall short of the physician's finest art. Let us live and labor conscious always of the spirit of democracy.

For if democracy is the best form of government, that democracy only is best which is integrated out of the sanest and

strongest elements. The execution of the Selective Service Law revealed to us an amazing burden of mental and physical adult unfitness. The crippling defects of children are made bare to us by examinations had in the public schools. For protection and perfection of itself, democracy does and must concern itself with the development and character of its kings. Democracy by right lays claim to the child and to the man. The making of sane and strong men, why is not that the first business and use of a medical man in a democratic community? For this vital work, his fitness is as the fitness of no other man.

I know that it is said that all just powers of government are derived from the consent of the governed. If it were true as to nations, it is not true as to men. The just powers of government have deeper and more wholesome foundation than that. In a democracy, the just powers of government are founded in the service that may be done. Even a King must be a King not for himself but for the service of his subjects. In a democracy, until our multitudes of "uncrowned kings" are developed to comprehend this bottom fact within themselves, the just powers of government are founded in the obligation which the greater man owes to the less for the development of the lesser man toward the level of the greater, for the safety of both the greater and the less. Even in times of peace not less than in war, is there not a field of service wherein democracy has the moral right of draft over the physician because of the State's need of his peculiar fitness?

This same thought in time of war I declared to you in this place a year ago. I shall always be proud of the profession in North Carolina when I recall the agile unanimity with which as one man you rose to your feet in approval of it. Voluntarily you subjected your services to your country's need. Less acutely tragic are human needs in a time of peace than in time of war, but none the less tragic after all. May I not ask now your approval of this same principle in your every day living in a time of peace? It covers, I tell you, the doctor's best, his reasonable service, for North Carolina.

I am mindful of the unusual burden that has been uncomplainingly borne both by those who went with the armies and by those of us who remained and cared for the civilian population at home. I am mindful of the sacrifices made on either hand, a sacrifice too often all the way to death. The doctor who went with the colors learned more than the doctor who stayed at home. Of lonely sorrow and bitter anguish he saw more. In either case, I find the same heroic spirit and sense of human service.

Medicine and surgery grew lustily on the terrible experiences of camp and battlefield. Through this knowledge so bitterly gained, mankind is to be better served by the profession. Surgery especially, winning fresh laurels in old and new fields, learned to snatch from death the wounded and is remaking mutilated remnants of men into renewed and useful life. It reclaims for living service men who in other days would have passed out shattered bodies undone. Mere medicine looks on not envious but in glad wonderment at the surgeon and the nurse; but turning from the surgeon's brilliant field, medicine confesses the weakness of drugs. The comparative futility of drug-giving gains new emphasis not from the camps only, but from the pandemic of influenza, more destructive of life than battle, which searched for and found its victims in every corner of the commonwealth. Even the laity must now know that there is more for the doctor to do than to give drugs and be therewith content.

The chief gain in the domain of medicine is in sanitation and the prevention of disease. What, then, can this Society and its membership do more for the healthy and happy living of our people? Very much, I am persuaded, by giving them the benefit of what medicine knew before and has since learned from the war. We can better direct their living and prevent disease; and an ounce of prevention is worth a ton of cure when you cannot effect the cure.

I am not "a therapeutic nihilist," and I knew that there will always be illness calling for the mere physician and giver of drugs; and I know that, as yet, the folks just will be drugged. I know, too, despite our best endeavor, men will sometimes fall into conditions wherein nothing will at all avail but the giving of drugs and the tender ministration of a gentle hand. They that are sick have need of a physician, is true; but they that are well have need of a better physician—of one who knows and will teach them wherever he goes so much of health that they may avoid disease. It is the best physician's business to exemplify and to teach the fine art of living every day of his life.

So much of disease lies in the domain of the preventable, that it is a reproach against the profession that there is so

much illness as there is. I would love to think of every doctor as a peripatetic apostle of health, a kindly sentinel against disregard or infraction of natural law—as one who prevents wreckage and is greater than a simple salvager of waste. I would love to hear him tell how much the health of his community has improved under his influence, boasting of the health of it and the happiness of his people, and rejoicing righteously in the happiness of his own helpful heart. But, if he told me rather of his success as a practitioner of medicine and measured his success by the fatness of his bank account, a sort of sadness would come over me. For that would be unprofessional; it would be rank commercialism, the poor unconscious of his noblest heritage.

In other words, the first consideration of a man in a democracy should be the welfare of his fellows: the first consideration of a medical man in a democracy should be the public health. This is the field of his greatest usefulness. He that is profitable mainly to himself may be, in the best scheme of living, a very useless man. Perhaps that is the best if not the worst that could be said of him. I am persuaded that this view is becoming more and more the view of the intelligent laity, and it would be a sad reproach if less were said for the profession in North Carolina.

To the school-teachers throughout the State the profession and the public is indebted for valuable service in public health work. How much we are indebted to the pulpit, seeing the constancy of its opportunity, I do not know. If these good gentlemen of the cloth have too much rested their vision on eventual golden streets, the war has shown them, doubtless, more immediate human needs. To the newspaper men in North Carolina, I make my profoundest acknowledgment of the splendid service which they are rendering in public health propaganda. For this public service (albeit they gorge themselves with amazing patent medicine advertisements to enhance their living) I think in these aqueous times to their health: "May they live long and prosper."

With the return of so many physicians from the camps and the battle-fronts, men trained in sanitation and local prevention of contagious and infectious diseases, and of soldier boys who of necessity have learned the value of clean and careful living, it is an opportune time to move forward effectively in preventive medicine. If we could convert into popular wisdom the knowledge now among us, the cheeks of this good State would blossom like a rose. We could save in a little while from death in North Carolina more of life than the war and the epidemic took from us. In every community, returning from the army are to be found men of both races. They are robust, living epistles of lawful living. They would make a broader highway for public health endeavors than we have heretofore traveled. The wisdom of the hour leads the profession this way.

What the war has taught us touching the moral side of a young man's life, what we have learned of mental conditions and bodily disease, it now rests as a democratic obligation upon medical men to put before the public for the sanity and strength of the people. In this benign democracy we have our rights, to be sure; but we have our duties as well. They that have learned best the fine art of living are the happiest. They find happiness not in the selfish assertion of individual rights, not in selfish living, but in the glad discharge of serviceable duty to their fellows. In a time of peace not less than in war, may every member of this Society stand with happy pride to the full measure of his public obligation and our present opportunity.

The Central Canal of the Spinal Cord.—Kramer (American Journal of Insanity), calls attention to the possible importance of the central canal of the spinal cord in the pathogenesis of poliomyelitic disease. This canal is open in animals and young children, but authorities disagree as to its condition in adults. The author examined 206 spinal cords of which sections were made in the cervical, dorsal, and lumbar segments. When the canal was found open in all these localities the whole cord was set aside for study and sectioned at intervals of five millimeters throughout its length. The central canal was found open throughout in fifteen instances, or 7.23 per cent. The author believes that drugs or toxins can very easily be carried upward through an open canal into the central gray matter. This would explain the fact that poliomyelitis is essentially a disease of infancy and childhood, as in this period the canal is probably always open; he thinks that in all cases dying of this disease the cord should be examined, in order that more light may be thrown on this possible route of infection.

HABIT DISEASES AND THEIR FUNDAMENTAL CAUSES.*

By W. C. Ashworth, M. D., Greensboro, N. C.

The title of my paper was suggested because of the wide and prevalent belief among the laity and a large per cent of the members of the medical profession that habit diseases are largely volitional and therefore no real cause responsible for them.

It has been my privilege, during a period of nearly twelve years as medical director of an institution, to observe and study this large and increasing class of cases with a degree of accuracy and care that is scarcely possible for the general practitioner. I have, during this time, been intimately associated with a large number of both drug and alcoholic patients, who, in many instances, seem to take a special interest in confiding in me because of their habits and resulting diseases.

I am convinced from my study of this class of cases that many, in fact, the major per cent of my cases have been victims of environmental conditions, sufferers from various physiical and mental infirmities, which have acted as an exciting if not the primary cause of habit formation. It is signally unfortunate for most of us that we are victims rather than masters of our environment and circumstances.

I purposely do not emphasize very strongly the role that heredity plays as a cause for habit disease. I am mindful of the fact, however, of the verity of the scriptural injunction 'that the sins of the fathers are visited down upon the third and fourth generation.' I believe, however, in many instances that the individual born of alcoholic or excessive drug using parentage is more susceptible to environmental influence than the person who is born of sturdy ancestors. I have frequently observed that the weakling of poor resisting powers can frequently be made strong by removal from the enervating influence of unhealthy environment, therefore heredity only acts as a predisposing rather than an active cause in the development of habit diseases.

The average individual, especially the average business and professional man, many times feels his inability to cope successfully with the exigencies of life. In other words nature has failed to endow a number of us with sufficient mental, physical and moral stamina to enable us to meet successfully and heroically the succession of reversions and disappointments that so often crowd upon us.

With the above premises as a basis for the cause of habit diseases I am forced to conclude that a habit in the large majority of cases represents a form of cowardice. The individual confesses his weakness to meet his competitor or brook the disappointments of life by taking into his system some narcotic drug that will make a grief less poignant or give him a certain amount of oblivion to the stress and strain incident to every day life. We are all fully cognizant of the fact that artificial stimulation or unnatural oblivion are disappointing and therefore the misguided individual has a rude awakening to the fact that instead of being better prepared to meet his adversary or competitor he is only left puerile and emasculated to engage in the turmoil of life.

I have been reading with much interest recently. "The psychology of Every Day Life", by Professor Freud of Vienna. I believe with the above author that the emotional part of our life is not given due consideration, in fact, I am convinced that excessive whickey and drug stimulation often arises in the emotions of the individual. I do not believe, as many of my confreres no doubt think, that the habitue want only dissipates, but in many instances the major part of habitues not only feel a real physical or emotional need of a stimulant or narcotic drug. I admit, however, that it is not always possible to find the real clinical entity or physical need for the narcotic drug or stimulant but with a careful and painstaking study of the case I am sure that in most cases the reason for the habit can be found somewhere in the physical, emotional or mental condition of the patient.

My conception of the cause of habit disease naturally makes me feel disposed to throw "the mantle of charity" over the large per cent of these cases, in fact, I find myself becoming more tolerent pari passu as my experience increases with this class of cases. The verity of the old saying, "We do not always know where the shoe pinches the other fellow", is frequently before my mind when confronted with the unfortunate drug or alcoholic patient. I believe that our failure to understand the fundamental causes of habit disease is due rather to our desultory and hasty examination of them rather than to the absence of the causes of above out-

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lined. It is quite natural for most of us when an alcoholic or drug habitue presents himself for treatment for us to dismiss the case quickly as possible within the belief that he is a willful pervert and scarcely deserves the taxing of our resources in his behalf.

It would consume entirely too much valuable time of this society and uduly prolong the length of this paper for me to undertake to enumerate the various physical causes responsible for the formation and continuation of whiskey or morphine addictions.

A case has just come under my notice, however, within the last few weeks of a prominent business man who presented himself to me for treatment for the whiskey habit. On casual examination I really could not determine any reason why this man should drink whiskey to excess. It appeared on superficial examination of the case to be one of a few instances where a man was drinking whiskey to excess for his own violation rather than from any physical need for the stimulation. After a more careful examination, however, I ascertained that the man was suffering from high blood pressure and all the attending nervous symptoms, which were no doubt responsible for his excessive use of whiskey. It may be interesting to know that with the judicious use of nitro glycerin, electric light baths, and proper attention to diet regime, that this patient soon lost his craving for alcohol. I have no doubt the results of my treatment for him will be mutually satisfactory. It is obvious, however, that any treatment directed to his habit per se rather than to the fundamental cause would have been absolutely valueless.

Aside from the actual disease of the individual which demands relief by the use of narcotic stimulants, we frequently encounter the neurotic who has no demonstrable disease but whose suffering or discomfort is largely of physical or mental origin. It is this class of cases that most frequently desire to escape or flee from the realities of life. We all have an inherent desire to flee from that which torments us and often times we are unconsciously impelled by the intensity of our anguish to find relief in ways which are more or less pathological. When we once grasp the truth of the above statement we will be appreciably nearer a practical solution of the various delinquences, petty crimes and various acts of immorality which are largely traceable to the inborn or innate tendency to flee from the realities of life rather than face them heroically. I have frequently observed that incompatibility of temper between man and wife is often responsible for the tardy convalescense of my patients.

In the domain of the various neuroses the modern medical psychologist has ample opportunity to work out definitely the fundamental causes of various habit diseases or rather the disposition of the apparently normal individual to go off at a tangent and often times manifest the most bizarre and unexpected symptoms of mental disease. In searching for the fundamental cause for the aberrant behaviour of the individual we should take into consideration his life and the elements which are real or are regarded by the individual as being intolerable.

It does not require a long stretch of the imagination for us to recognize that the unpleasant life situation may result from a variety of causes. Perhaps, it is due to domestic infelicity resulting from an unhappy marriage. Perhaps, due to the inability of the individual to progress in a satisfactory way in his chosen profession. Perhaps, it arises from the hardship and deprivation of poverty. Perhaps, it has its origin in the boredom of the idle rich. In fact, it may originate from any one of the innumerable sources. Whatever the cause the effect is a profound feeling of dissatisfaction and an instinctive longing for oblivion or possible flight from the intolerable situation which oppresses the individual. While in most cases the unfortunate individual can be reclaimed provided his life can be regualted and the intolerable surroundings changed.

We are all fully cognizant of the fact that the momentary oblivion from narcotic drugs and alcoholic stimulants is not in any sense a relief for the individual.

In the evolution of our race, however, we have long since discovered that for the common good of the race, no less for the individual, the unpleasant things of life must be strongly met rather than camouflaged or fled from. The shirker or moral derelict rightly deserves our condemnation and we all realize that the slacker's life is incompatible with progress, whether in winning a battle or pursuing success in civil life. We all denounce the individual who is suffering from spineless inertia and regard him as one who is blocking the wheels of progress and a constant parasite on those who would succeed.

The unfortunate drug or alcoholic addict is in many instances a product of en-

feebled ancestry, though, as previously stated, is in the large majority of cases the architect of his wn fortune rather than a faulty offspring of a pathologic ancestry.

We have from almost time immemorial connected genius with dissipation. We are very prone to select the comparatively few immortal bards whose writings have been handed down from generation to generation as evidence of an inspired genius. We often lose sight of the fact that genius is only unlimited capacity for work, and, therefore usually acquired rather than congenital, or, as Osler says, "Two per cent inspiration and ninety-eight per cent. perspiration." Thus he who is inspired by alcohol is to his fellows as was Lady Macbeth to the King's Guards:

"That which hath made them drunk hath me bold;
What hath quenche'd them hath given me fire."

We often marvel at genius and lose sight of the fact that ordinary genius might have been greater genius if the narcotic stimulant had been avoided. All of us have divide potentialties but few of us develop them. The genius instead of being an individual to whom something has been added without is in reality one who for some reason or other has experienced a release of his powers. In such an individual the forces that mask the hidden faculties of commonplace beings are abated or lost. Alcohol sometimes paralyzes these forces in the same manner that it loosens the chains of cavern dwellers that the immortal Plato conceived human beings to be. If we confine ourselves to the small group of geniuses of peculiar constitution, whose spiritual and artistic powers have been liberated at propitious times by alcohol, we are amazed at their productions. We conceive it to be our duty to register the evidence of genius without inflicting gratuitous moralizings of irrelevant clinical lectures or discussing the social pathology of alcoholism. Naturally alcoholic inspiration produces very uneven results as manifested by the indirect quickening of wit, humor, imaginative fantasies, and creative impulses, have been more often capricious rather than sustained by facts. It has caused many a great writer to develop a style characterized by erroticism and an inequality which is rather grotesque than beautiful owing to abrupt transitions from the deepest melancholy to obscene gaiety, and a marked preference for such subjects as madness, drink and the gloomiest scenes of death. We must admit that Shakespeare's description of the effect of whiskey on the sexual powers applies in a sense to its effects on many intellects.

"With the cup the soul lights up,
Inspirations flicker;
Nectar lifts the soul on high
With its heavenly ichor;
To my lips a sounder taste
Hath the tavern's liquor
Than the wine the village clerk
Waters for the vicar."

The veritable epidemic of alcoholism which occurred in the Elizabethan era was coincident with the great intellectual awakening of that age. Was it more than coincident? May there not have been a cause and effect relationship?

Shakespeare tarried much at the Mermaid Tavern with other Elizabethan artists and poets. Shakespeare entertained his two old cronies, Michael Drayton, the poet, and Ben Johnson, the dramatist, at New Place, and according to the statement of John Ward it seems drank too hard for Shakespeare died of fever contracted there.

It would seem to the casual student of literature that nearly all the great writers found it necessary, or, at least, made use of a stimulant in order to inspire the amount of genius necessary to immortalize them. We could name ad libitum distinguished writers, poets and dramatists, who have habitually or occasionally sought inspiration in their "cups," namely—Shakespeare, Goldsmith, Addison, Schiller, Goethe, Burns, our own Edgar Allen Poe, and others whose memories are too sacred to indict with offense of any description.

I have purposely diverged from my subject in order to convince my confreres and laymen that narcotic stimulants are not used wantonly nor is their use confined to those of only mediocre ability.

When we think of the productions of Omar Kharyyam and his immortal Rubaiyat we are convinced that alcoholic stimulation is not always productive of evil results. In other words that the literature of the world has been greatly enriched by the genius inspired by alcoholic stimulation.

We all are familiar with the fact that whiskey or narcotic drug stimulation sometimes dethrones the reason of the user, paralyzes his mental faculties and makes him satisfied with existing conditions. It would be manifestly unfair, however, for you to condemn so univer-

sal a stimulant without giving due consideration to its effects on different individuals. We grant that in many cases it devitalizes and stupefies while in others it stimulates the latent or dormant faculties of the individuals.

I am not offering any apology, however, for the excessive use of narcotic drug stimulation, as I am sure the sum total of its devastating effects are more than counterbalanced by any good that may accrue from them.

It is well known that the effect of alcoholic stimulation with most people tends to make them satisfied with their effort and in this way deprives them of the incentive to excel or surpass their associates. We are cognizant of the fact, however, that a certain amount of sedation or freedom from the stress and strain of every day life must be obtained in some direction. We are all convinced of the unwisdom of seeking it in our "cup," but many of us are constitutionally unable, if not by financial circumstances deprived, of obtaining the necessary amount of rest and diversion by pursuing some popular hobby, such as golfing, fishing or other out door sports.

We vividly recall that Omar Khayyam's spontaniety and reckless abandon with his verses was inspired by resorting on many occasions to alcoholic stimulation. We remember that he was supremely happy when with—

"A Book of Verses underneath the Bouth,
A Jug of Wine, a Loaf of Bread—and
Thou."

The writer is convinced that drug stimulation with the majority of cases is more often one of post than proctor hoc.

It is now believed by most alienists that every inebriate aside from his inebriety is mentally deficient. That it is our duty to be charitable to the unfortunate habit case rather than censure unduly without understanding fully the life situation of the person. That every court before which juvenile criminals are summoned should have present a competent psychologist to pass upon the mental status of the prisoner. That the cure of the average narcotic drug habitue implies not only the obliteration of the craving for narcotic drug stimulants but more often a complete change of environmental conditions surrounding the person. That genius and alcoholic excesses seem to be inseparably connected. That precociousness plus unremitting and assiduous toil is often mistaken for genius. That the so called narcotic drug fiend is not simply the victim of a bad habit but is the victim of a mental state which drives him to the excessive use of drug stimulation or precisely the same mental state that drives another person to a nervous breakdown. That the intolerable realities of life which are responsible for this mental state should be given due consideration before adverse judgment is pronounced.

The victim of habit disease must not only be rehabilitated but his life situation be made more tolerable.

A SEASONABLE DISSERTATION ON FAT.

By Geo. M. Niles, Ph. G., M. D., Atlanta, Ga.

The role of fat in the human organism may be considered as material, esthetic, and psychic. The first may be physiologic, pathologic, or economic in its aspect; the second may mark the difference between the rounded anatomical contour, displaying at its best the human form divine, the beauteous Venus, the plump Cupid, and the haggard ugliness shown in emaciation, or in the stage of the "shrunk shank" and "the lean and slippered pantaloon."

The psychic manifests its influence over the temperament and disposition from earliest infancy throughout life, and I shall endeavor to prove that in this particular the role of fat has not received sufficient consideration.

Protein, that prolific source of animal energy and vigor, needs no advocate to plead its rights, for by its very nature the protein content will always command a liberal share of attention. Fat, however, is often unappreciated, often misunderstood, and more often unjustly blamed for sins or delinquencies of other food products, so that a general survey of this subject, possibly more discursive than scientific, commended itself to me as being of probable interest.

From fifteen to twenty per cent. of each healthy body is composed of fat, though only about one-fourth of an ounce is contained in the blood. The amount of fat within normal limits varies widely, being often influenced by heredity, age, and personal habit more than the quantity of food taken. Where there is a tendency to take on fat, it readily accumulates by either a slight increase of the daily diet or decrease of regular exercise.

The storage of fat is also favored by sleep, as it has been shown that, during periods of somnolent inactivity, fatty deposits most readily find snug and convenient resting places.

The chief sources of fat in the human body are the starches and sugars, though certain fats are directly utilized. Emulsified fat is split to a considerable extent by the stomach steapsin, an enzyme which acts efficiently only when concentrated. It might be well to mention that pepsin has not been shown to possess any fat-splitting action at all.

As the fat is carried past the pyloric outlet, it is immediately acted on by the pancreatic juice, and, until recently, it was generally assumed that it was partly broken down by the pancreatic secretion into fatty acids and glycerine, that the former united with the alkalies of the intestines to form soaps, and that the soaps brought about an emulsification of the fat. On account of its alkalies bile was said to play an important part. Unlike other nutritive substances, fat would then pass from the intestinal canal into the mucous membrane, not in solution, but as an emulsion.

To make a long story short, however, the weight of present opinion would lead us to believe that fats are completely decomposed in the intestine, and that the fatty acids formed are absorbed either as soaps, or in a solution brought about by the bile.

As a source of energy for the development of heat, fat may be described as quickly available, but not so lasting. Experiments of both Rubner and Atwater have demonstrated that foodstuffs generate the same quantity of heat when burned within the body as when burned outside the body, and that, while one gram of protein or one gram of carbohydrate will each generate approximately four calories, one gram of fat is good for over nine calories. The conclusion, therefore, is obvious that, by its concentrated fuel power, fat preserves other tissues, especially the albuminous, from destruction by oxidation, and is valuable as a reserve force ,instantly available when any vital emergency requiring it arises.

Another material function of fat is that of "protein sparer," for, though its tissue-building properties are limited and incidental, by its presence the protein is permitted to better perform its manifold tasks.

We might with propriety, in this connection, liken fat to the housewife, who, though not apparently earning anything, by her care and industry conserves the fruits of her husband's labor, enabling him to not only support the domestic establishment, but to also lay aside a surplus. Should an emergency arise, whereby the head of the house becomes incapacitated, this housewife could at once become an active earning factor, augmenting the depleted income, and possibly averting serious disaster.

As a storage of energy, ready to be drawn on as needed, fat is of great importance. In starvation about ninety per cent. of the body fat is consumed before death, so we can easily see how a generous physiologic supply laid up for a time of stress will aid in a battle against wasting disease or defective assimilation. Fat also, though generally burned rapidly, can be used very slowly where there is little muscular activity, as shown by animals in hibernation.

The last material use of fat is to serve as a covering and protection to the body against both injury and cold—in other words to cushion the frame. Fat babies can bear without hurt falls that would seriously injure thin ones; fat people can stand with impunity many hard knocks that would completely demoralize attenuated individuals; while a good blanket of subcutaneous adipose tissue will answer every purpose that could be expected of woolen underwear or heavy clothing.

From an esthetic standpoint the physiologic and orderly distribution of fat about in the connective tissue marks the contrast between physical beauty and gaunt ugliness. Painters, novelists, and dramatists have been quick to note the difference, and in their delineations of physical charm, emaciation never finds a place. On the contrary the villain as most often described is a cadaverous-looking wretch, with peaked nose, lantern jaws, and skinny limbs. Should, by any chance, fat be present, it is pictured in pathologic and disgusting quantities.

As a few well-known illustrations I might contrast the "fair round belly with fat capon lined" and the "lean and hungry Cassius;" the winsome Juliette and the witch of Endor; fair Jessica and the hook-nosed Shylock; the round-cheeked Don Juan and the lean-visaged cut-throat pirate, so graphically portrayed by Lord Byron—in fact history, literature, and art are full of such antitheses, demonstrating that in the entire animal kingdom there can be no comeliness in the absence of fat.

That fat will accumulate in unused portions of the body, while it disappears in regions of local activity, has been utilized by directors of physical culture, as well as "beauty doctors" the world over. Various forms of exercise, both systematic and scientific, have been devised, besides

numerous appliances, all of them aiming to increase or decrease fatty deposits in different parts of the human anatomy.

By exercise alone some forms of obesity may be corrected, while abdomens of aldermanic proportions can readily be abated. There are also ingenious methods by which too prominent angles, as well as unsightly hollows may be cushioned or filled with fat, so that, to the earnest seeker of physical attractiveness, in the absence of serious wasting disease, there is nearly always "balm in Gilead."

In considering the psychic role of fat, we should specially bear in mind its reserve function in relation to active vital processes. In the proper conduct of the human mechanism there is just the right amount of labor for each organ to perform, but generous Nature allows sufficient latitude within physiologic limits to meet ordinary emergencies. Extraordinary conditions, unless fortified against, may result disastrously, and a liberal deposition of fat is one of Nature's wise precautions.

Hunger is the expression, not only of the state of the stomach, but of the ultimate cells of the body, and neither comfort nor happiness can exist where hunger is present.

It has been commonly known from the earliest antiquity that fat people were more contented, more optimistic, than lean ones, and that their viewpoint of life in general was largely governed by this prosaic attribute.

Now I might compare the supply of fat to an ample bank account of a busy and provident man. That he possesses this surplus does not prevent him from diligently following his usual avocation, but the knowledge of its presence, and that it can be instantly obtained, lends a mental satisfaction that would be absent were he living right up to his daily income.

I believe, therefore, that my reasoning is correct when I assert that a physiologic reserve of fat, by its very presence, exerts a quieting and reassuring influence on the vital forces most concerned in constructive metabolism; and, if I may adapt a Scriptural quotation, this reserve, in language intelligible to those forces, says: "Thou hast much goods laid up for many years; take thine ease, eat drink and be merry."

On the other hand, when the department of constructive housekeeping in the body is furnished barely enough to ward off retrograde metamorphosis; when obscure nooks and recesses have to be frequently ransacked for their scanty stores of fat, in order to keep up normal oxidation; when nutrition is at par only a part of the time, while the protein content has to work overtime in order to manufacture sufficient energy and heat—then is felt the vibrations of a tiny voice of unrest and bodily discontent, which sooner or later react on the disposition, developing into that pessimism and temperamental dissatisfaction so often present in lean people.

The limits of this paper will not permit a discussion of the dietetics of fat, a comparison of its vegetable and animal forms, or its adaptability to different conditions, as age, occupation, or environment.

Let this be considered rather a deserved tribute to that food element, which, lacking the strenuous qualities of protein, the versatility of the carbohydrates, or the leavening functions of the inorganic salts, fulfills a manifold mission of its own, lending to the body warmth and security; to the mind peace and good cheer.

Cyanide of Copper in Tuberculosis.—At the last meeting of the A. M. A., Dr. C. A. L. Reed, of Cincinnati, said that there was a remedy which stood in the same relation to tuberculosis that salvarsan did to syphilis. This had been used in tuberculous peritonitis with recovery in two cases. This remedy was the cyanide of copper as used by Dr. Kogo, of Japan. Results were striking in pulmonary tuberculosis. The classical symptoms subsided within 24 hours after an intravenous injection, the cough ceased, the pus disappeared from the sputum. Tuberculosis of the joints yielded in a manner equally satisfactory.—Medical Record.

Modified Stokes-Gritti Amputation.—Chapple (British Medical Journal) recommends the complete division of the attachment of the quadriceps to the upper margin of the patella and the suture of the patella in place on the under aspect of the lower end of the femur by stitching its margins to the edge of the periosteum with catgut. One or two additional deep catgut sutures are usually required and a firm button suture should be placed through the skin flaps. By this method the patella is prevented from being displaced through action of the quadriceps and a good weight bearing end is provided for the stump.

INDEPENDENT THOUGHTS FOR INDEPENDENT THINKERS.

By F. E. Aspinwall, M. D., LaGrange, Ky.

A man to be true to himself, which is his first duty, must think his own thoughts and act according to the dictates of his own reason and conscience. Such conduct involves no injustice or disrespect to any one.

If one lay aside his reason and adopt a policy of "Follow my leader" he is wrapping his talents in a napkin and is not making true progress. If one give up his own mind and let another do his thinking and thus control his will and opinions he might as well have no mind of his own for he becomes a mere weather-vane of opinion. The light of reason thus goes out.

In the dark ages, which followed an era of comparative enlightenment, the independent thinker was a heretic and was suppressed. The leaders wanted only to be followed. Even they did but little independent thinking, for they followed their leaders. Hence there was little progress, instead a lapse into the darkness of ignorance.

It is somewhat the same now. Human nature has not wholly changed. Independent thinkers are now far more numerous than formerly and many such are able to command a following, but the masses are still followers of their leaders, really blind followers, for they suppress the light of their own reason. The present rapid progress of the world is due to the greatly increased numbers of independent thinkers, each striving for the attainment of the good and the true.

My preceptor in medicine was a regular graduate of medicine, a man of unusual intelligence and abilities, a fearlessly independent thinker and was prominent in medical literature. He taught many eternal truths which, unfortunately, have been recognized and adopted only by his own immediate students or followers, other students having followed their leaders in different directions. Hence the divergence of opinions. His most important bed-rock principle was that disease is not an enemy at war with the body, but an effort on the part of the vital system to restore normal conditions.

This principle governed all his practice. Hence he never opposed the symptoms, but merely endeavored to so regulate or modify them that they should not become extreme, as for example, a dangerously high temperature. His success was such as to warrant him in holding to his principles. His was one of the first sanitariums in New York city. During the great smallpox epidemic in that city some 35 ye ars, more or less, ago his boarders and patients were not vaccinated but were supplied only with the most wholesome food and water and air and the very few that developed the disease were treated in the most simple manner, scarcely more than well nursed and isolated in upper rooms. All these patients recovered and, my recollection of his account is, without a scar. True, the patient who, previous to infection, has "lived high" is almost certain to develop scars.

The present serum and other such treatments were not thought of then and are the logical outgrowth of the surviving false theory of disease. A correct theory of disease when generally accepted will naturally eliminate all false notions of cure and substitute therefor more rational treatments.

To understand disease we must first understand health, which is clearly the normal play of all the functions, which is rendered possible only by favorable internal and external conditions. Unfavorable external conditions or unhygienic living may quickly lead to unfavorable internal conditions and these to abnormal vital action which is disease. Disease is, therefore, an enforced departure from the normal functions or an effort to restore normal conditions. When the abnormal internal condition is occasioned by unfavorable dietetic habits resulting in unbalanced nutrition and retained waste the abnormal vital action thereby occasioned is analogous to a house-cleaning, and this is by far the most common form of disease. Clearly, this is not a process that should be opposed or suppressed, but rather one that should be encouraged and promoted, for unless it terminates successfully the life of the organism is in peril through clogging and poisoning.

Here appears to be the key to successful treatment: Secure a correct balancing of nutrition and favor the elimination of waste. Also protect the patient from all unfavorable influences. The natural materia medica consists mainly of dietetic, temperature and sanitary regulations and mental and emotional influences. Not one of these items can in any case be ignored without detriment to the patient.

Fear not germs. They have not yet been proven to be more than scavangers feeding on waste and degenerate tissues, never preceding in dangerous numbers but always following abnormal condi-

tions. They have no terrors for those who know their nature and purpose and who are themselves in normal condition. Their purpose appears to be to render inert abnormal accumulations of waste within the system. When they have accomplished this their work is done and they disappear. The patient then, under otherwise favorable circumstances, quickly recovers, and after such natural recovery relapse never occurs.

Under the popular serum and other literally shocking treatments the vital sensibilities and powers are forcibly diverted from the house-cleaning work in hand, if it has been started, thus leaving it unfinished. Such treatments interrupt the course of nature just as a housekeeper's work would be interrupted by the intrusion of a tramp into her home. After recovery from the shock of intrusion and expulsion of the intruder, just as in the case of the housekeeper, the vital system is very likely to resume the work it previously had in hand. This might be after a short rest, but would constitute a relapse, and the shock and effort to expell above referred to might so exhaust the vital powers that they could not complete the work of elimination. This might constitute a fatal relapse, for the vital organism usually accomplishes its purpose in such cases or dies in the effort. Or, because of exhaustion it may suspend the work of elimination for a time and then take it up again in another part of the body, and this would constitute a sequela. Be it noted that after natural recovery, that is, complete restoration to normal conditions, relapses and sequelae are unknown. Hence is seen the complete vindication of natural methods of treatment which allow and promote elimination and natural recovery of normal conditions. Powerful drugs when swallowed divert the vital functions from their routine work just as do the injections herein referred to and are therefore open to like objections.

Hardly any treatment not causing instant or nearly instant death could be more shocking to the vital sensibilities than are the now popular "shots" for the prevention or cure of certain diseases. Indeed these treatments do sometimes cause almost or quite instant death. That being the case it would seem unreasonable to maintain that those who survive these treatments are benefited by them. I maintain without the least fear of successful controversion that there is no convincing evidence that a single life has been saved or an individual's health benefited by any vaccine, serum, bacterin or antitoxin that has been used, while the evidence that thousands who have been subjected to these treatments have been either killed outright or permanently injured thereby is absolutely conclusive, and this is not mentioning the hundreds of thousands who have thus been made seriously ill but recovered and the millions who have been scarred and disfigured for life by these shocking treatments.

To boost these fallacious treatments many misleading statements and figures have been published, sometimes doubtless by persons who really believed what they tried to prove, but often by persons who certainly knew that their claims were not just. For example, a writer recently stated that the use of serum had completely eradicated typhoid fever from our army, whereas it is a fact that many deaths from typhoid have occurred in the army, and lately it was stated by a newspaper correspondent that somewhere in Europe our army was making a new high record in typhoid fever. Besides, every intelligent person knows that before these injection treatments were thought of typhoid epidemics were wiped out and prevented from recurring by good sanitation. The statement, therefore, that typhoid has been eradicated by typhoid inoculation is rank dishonesty, and all such false claims should be repudiated by all who know their falsity.

It is just the same with every disease now treated with injections, be the treatment given for either prevention or cure. It is either preventable or curable by hygiene and sanitation, but the boosters of the serums, etc., would rob nature of the credit due her and try to make it apepar that to their vile nostrums is due the sole credit of every prevention or cure of disease. What is their motive? The answer is: Business, nothing but business. Eliminate the business part of the proposition and the whole structure would fall, while the natural treatments would endure and become universal on their merits alone.

Of late years much "scare talk" has been resorted to to capitalize the ignorance of the masses. Every trifling matter that could be called infectious, contagious or epidemic has been widely published along with advice to at once secure the services of a physician in order either to prevent or cure the matter. This has brought grist to the doctors' mills, but the means is thoroughly dishonorable and reaction is bound to follow along with loss of prestige on the part of all,

even the honorable physicians who would not stoop to anything unworthy. The psychological effect of this propaganda has undoubtedly been to seriously affect the health and happiness of untold numbers of people.

The scare talk that includes the advice to go to bed and send for a physician on the first sign of a "cold" I have repeatedly seen ignored with evidently only beneficial results, even in cases that now would by many physicians be called "flu." The explanation is simple: Cold pure air promotes elimination from the membrane of the breathing tract just where nature had set up an eliminating or house-cleaning effort. The influence of the outdoor air was right in line with the effort of nature to eliminate. This is the true "similia similibus curantur," if there be such a thing. At least it was in line with nature; no suppression of symptoms; recovery came quickly in each case. And no amount of exposure, even severe chilling, during convalescence, brought on either a relapse or pneumonia. The latter often follows the cold or flu that has been "cured," no, suppressed by treatment that is wholly antagonistic to nature.

Be it understood, however, that there is no known line of demarkation between a cold and the influenza, the severity of any case probably depending on the condition of the patient at the beginning of the infection, the worse the condition the more malignant the case. But something must be wrong with modern treatment, for formerly the influenza was not as fatal as now, at least in the army where injections are universal, for it has been officially reported that in the army the flu has been nearly five times as fatal as among the civilian population of New York where serum treatment is unusual. It is folly to say that the most robust are most likely to die of this or any other disease.

My preceptor, above referred to, wrote about the year 1850: "Influenza, like Asiatic cholera, is usually epidemic and has prevailed at all seasons of the year and in every state of the thermometer, barometer and hydrometer. It is the most widely spreading epidemic known, having extended over all of Europe and a part of America in the same season." He says also that the danger of this disease is not in proportion to the violence of the symptoms as compared with other febrile diseases. Evidently the modern treatment has only rendered the disease more fatal; no, the disease is the same as formerly, no more fatal under rational treatment.

This reminds me of the report of a hospital in Europe that I read many years ago. The hospital became overcrowded with pneumonia patients and to relieve the situation many of the more hopeless cases were removed to tents where they were comparatively neglected. Nevertheless, a larger percentage of these patients recovered than of those carefully protected and cared for in the hospital. I also reaall a report of a number of cases of typhoid fever in a London hospital which was published in the '70s in Braithwaite's Retrospect. The report stated that several of the more hopeless cases were given cold baths and no other treatment. In each case the temperature was promptly reduced to nearly normal and never regained a high figure. Each of these cases recovered, while many apparently less serious in the same hospital and treated in the usual way proved fatal. These and thousands of other cases that I have known or read of only tend to confirm my conviction that close to nature treatments are safer than those that are wide departures therefrom.

Consider for a moment just what this injection treatment is: It consists in injecting into the life current one or another wholly foreign matter which is always an awful shock to the vital sensibilities which most jealously guard to the limit of their power against all such intrusions into the vital domain. Under such shock other matters to which the system under usual conditions would and should give attention are at once and for some time thereafter literally forgotten. The vital energies are sidetracked by the intruder. Natural cure can not take place until the intruder is ousted. The vital sensibilities are also blunted or rendered less acute and hence they allow more accumulation of waste in the system before starting house-cleaning than they would normally. This is modern prevention or cure, but clearly a setback to the patient, for the vital power that should have been used in legitimate eliminating processes has been diverted to the expulsion of the foreign matter that was forcibly injected into the life current.

It has been officially determined and stated that cholera serum injected into breeding swine deranges their reproductive functions, and that the same treatment given to growing pigs is very apt to stunt their growth, thus rendering them comparatively worthless. If this beneficial (?) and saving (?) treatment thus injures the hardy swine, how can it

be expected that similar treatments will benefit and not injure the more susceptible humankind?

Degeneracy of delicate structures would seem to be an inevitable result of a clogging of a considerable number of the finer capillaries therein. Such clogging not infrequently occurs with the ordinary pathogene (waste) in the blood, but is probably considerably accelerated by the injection into the circulation of serums, bacterins, etc., that unavoidably contain particles too large or otherwise unsuitable for circulation in the finer vessels and that are at their best inherently obnoxious to the vital sensibilities. Take notice that the growth of this class of treatments has been followed closely by a corresponding increase in the diseases of degeneracy, espcially cancr, and this notwithstanding marked progress in hygiene and sanitation which in other respects has improved the public health. It is unthinkable that by greater attention to sanitation the public health should be built up in one way and pulled down in another and more serious direction.

These artificial preparations that are injected into the blood to fortify it against disease are on a par with the chemical, concentrated foods that have been so often tried. The vital intelligences will have none of them.

The Modern Treatment of Empyema by Antiseptics.—Stoney, in The British Medical Journal, says that acute empyema is easily cured by simple surgical methods. Through neglect or inefficient surgical treatment the lung and diaphragh become covered by granulation tissue which by its further development into fibrous renders the cavity non-collapsible and chronic empyema results. This condition is difficult or impossible to cure even by extensive Estlander or Schede thoracoplasty.

Most if not all cases can be cured without resorting to such dangerous and mutilating operations, because it is not necessary to obliterate the pleura space but merely to render its walls sterile, and this is possible by frequent washings with hypochlorite solution. The treatment is not dangerous provided a free exit for the fluid is provided.

The earlier the treatment is instituted, the sooner and more surely will a cure be obtained. The opening is most suitably made by removing one inch of the eighth rib in the scapular line. Three illustrative cases are reported.

THE DISEASE OF THEORIES—ECLAMPSIA.*

By James R. Garber, M. D., Birmingham, Ala.

In presenting a paper, for your consideration, upon a subject that has weathered the shell-fire and shock of many debates it may be well to pause for a moment for the sake of expediency and explanation. In this discussion of eclampsia—the disease of theories—it is not the purpose of the writer to attempt a readjustment of the many present-day tenable postulates concerning the etiology of this condition, nor is there any inclination to inject into the weird collection of theories anything new that would do nothing but becloud the issue in question. There is a justifiable reason for keeping the embers burning under this vital medical problem and it is to promote a serious meditation on the part of all who meet this obstetrical complication in the discharge of their duties. It has been tersely remarked that "familiarity breeds contempt" and unless we constantly remind ourselves that the machinations of the human mind may undergo distortion, which may be the outgrowth of familiarity, while the axioms of a science remain a constant quantity—though unsolved in some instances, as in eclampsia—the wisdom of philosophy, the strength of logic and the dependence in the principles of evolutionary science will be of no avail to man in the steady march of progression and enlightenment.

Pausing for a moment in retrospection the mirage of the past throws upon the scene, in relief, sins of omission and commission perpetrated in every field of medicine. The sins of omission may be of two varieties, willful or accidental but those of commission are willful to the Nth degree, and in our own review of personal short comings we usually seal the verdict with the charitable construction of unavoidable omission. The sins of commission have their genesis in the inherent weakness of human nature and in the fields of maternity work we find the generalissimos of those who seek the path of least resistance or who wilfully permit transgressions against the dictates of conscience and the demands of an exacting art. It is for the purpose of refreshing our minds on some of the plausable explanations of a complex problem and to provoke such a discussion as to have

*Read before the Jefferson County Medical Society, Birmingham, Ala., April, 1919.

made the study worth while that this paper is presented.

Before entering into the subject matter proper permit me to carify my position at the outset. In dealing with the toxemias of pregnancy I am want to make a distinction, purely arbitrary, but of sufficient scope as to aid me in overcoming the confusion usually encountered in such a discussion. In speaking of eclampsia I refer to that condition—with or without convulsions—caused by inactive emunctory organs, leading to autointoxication with a concomitant renal insufficiency. The term acidosis does not enter into the solution ,it being associated with the more serious type of toxemia wherein hepatic involvement is marked and spoken of as pernicious nausea and vomiting and acute yellow atrophy. I grant both are phases of toxemia but of different origin. If I may have your indulgence in referring you to an article by the writer appearing in the October issue of the Southern Medical Journal on "The Significance of the Ammonia Co-Efficient in Obstetrical Work" you will find the points I have raised more clearly elucidated.

In an exhaustive review of literature I have found a great many hypotheses advanced as determining the exciting cause of eclampsia and in order that you may follow me and decide the propriety of my conclusions I shall give you a synopsis of various articles read, that relate to the subject.

D. M. Erwin of the Department of Pathology of the University of Cincinnati attacks the problem from a comparative study of intracranial and peripheral blood pressure determinations. He argues that blood pressure variations produce edema of the brain and in turn the vasomotor centers fag thus causing the intracranial pressure to become greater than the peripheral blood pressure. When this relation of pressures is established convulsions ensue and by the tense muscular contractions, during the convulsion, the pressure is forced to the periphery thus lessening that in the brain and finally the margin becomes positive.

J. Young, as reported in the Journal of Obstetrics and Gynecology of the British Empire, presents a theory that recalls the relation of thrombosis and that of infectious origin. He endeavors to show that by a process of autolysis, toxins are generated at the sites of hemorrhages or areas of necrosis in the placenta and that these areas of hemorrhage or necrosis depend on whether the vein or artery is affected, resulting from thromboses in the ovarian and uterine vessels. He experimentally isolated soluble materials from healthy placenta and upon injection, found that they caused convulsions, focal necrosis of the liver and degeneration of the kidneys. Therefore, it seemed to him that the toxemias of pregnancy are due to the liberation of the products of early autoclysis of the placenta which are associated with recent infarcts of the placenta which permit the toxins to pass directly into the blood stream. In one word Young's theory may be termed "transplacental."

J. R. Losee and D. D. VanSlyke in the 1917 issue of the American Journal of Medical Sciences fail to indict the oxidizing agents of the body. They contend that toxemia is not attributable to the failure of diaminization of amino-acids nor to the moderate degree of acidosis observed. However, they suggest the constancy of the low urea ratios in the urine in eclampsia and the high ammonia coefficient in pernicious vomiting should aid in diagnosing the toxemias of pregnancy.

J. E. Talbot in Surgery, Gynecology and Obstetrics 1919 gives an interesting discussion of toxemia of pregnancy from the foci of infection viewpoint. His argument is to the effect that a focus of chronic infection draining toxins into the blood stream is the underlying condition. These toxins of chronic sepsis exert an inhibitory effect on the excretory function of the kidneys which causes the retention of waste products of the developing pregnancy.

Following along the same lines is another "foci of infection" theory. The author of this theory maintains the determining factors of toxemia to be (1) the rapidity of generation of toxins and (2) the eliminative ability of the woman. He recognizes that in the first one and a half trimesters of pregnancy toxemia is due to poor elimination while in the last one and a half trimesters it is due to non-elimination plus excretions of the fetus.

There are many advocates of the climatic theory as the causation of eclampsia, apparently basing their suppositions upon the same grounds as does the dermatologist who sees peculiar and striking variations of skin eruptions in certain seasons of the year. That there may be some foundation for such assumption it may be of interest to note that Dr. Ben Myers of Alaska reported 12 per cent. of his cases had eclampsia during an unusually cold wet season.

Mosher in the American Journal of Obstetrics, December, 1918, and J. W. Dun-

can and V. J. Harding in the Canadian Medical Association Journal October, 1918, believe the toxemias of pregnancy are due to metabolic changes and that nervousness is, perhaps, the dominating factor. It is shown that nervousness tends to disturb the equilibrium of absorption and elimination, causing a loss in same. This loss deranges the equilibrium between the surface of the body and the heat centers, thus throwing upon the maternal organism the additional exertion of providing proper oxygenation for itself and the fetus. These disturbances impair the heat dissipation of the body that controls metabolism.

The theory of maternal asphyxia is of importance. The exponnents of this theory show that such asphyxia is due to decreased lung expansion. Lowered resistance results from improper oxygenation. The blood pressure of the adrenalin glands is increased, as the result of the asphyxia and as a consequence of the increased glandular pressure an excessive amount of adrenalin is thrown into the blood and as a sequel to this concentration, acidosis results. Associated with the increased output of adrenalin and the acidosis is the corresponding rise in the systemic blood pressure.

Moulden in the American Journal of Obstetrics January, 1916, presents the very attractive theory of "fecal stasis" and so closely analyzes the problem that it is difficult for one to disagree with him when he remarks: "nothing could be clearer then, than that the average pregnant woman is a potential magazine of poisonous chemical compounds." The theories of focal infection, of fecal stasis including faulty elimination and transplacental causes of toxemia seem to embody a formidable array of arguments of cause for effect in the understanding of the causes of eclampsia, and for assistance in practical work I am willing to seek my comforts and inspirations in these fields.

The word mother is one not to be conjured with for it becloaks the loveliest creature of all creation, yet, in her majesty and eternal femininity she feign would conceal any side of many sided woman. The obstetrician, of necessity, becomes a crafty dipomat in his medical career, for to meet the cunningness and indecision of a woman demands of the physician a concentration upon the various phases of psychology—in short, he must lead yet appear to be led never permitting a loophole for even the suspicion of a compromise. And, why is this an axiom in obstetrical work? Because the condition is one usually unattended by disease and just as Mamma, Grandma, Aunty and cousin so and so followed the bend of their own inclination throughout gestation, by the same God-given right each woman pursues the tenor of her life at similar times. Eclampsia is the harvest reaped from the besetting sin of willfulness on the part of the physician or of the woman or of both. Therefore, in seeking the cause of this calamity why delve into the deep mysteries of science when a gentle tapping at the door of common sense may open to us sufficient aid in combating the condition?

I heartily endorse the fecal stasis theory of eclampsia for how often has it been demonstrated that the colon is the hotbed of retained waste products from which furnace toxins of every description are eliminated throughout the entire system? Toxins of any nature have special selective affinity for nerve tissue. The nervous mechanism of the body is the mainspring that maintains control of every organ in the body, consequently life itself. The conclusion, therefore, that anything that destroys or interrupts the functions of the nervous system correspondingly affects life, seems evident and warranted.

The term woman is almost synonymous with that of constipation and I venture the assertion that if a census of definitions could be tabulated as expressions from women, themselves, on what constitutes constipation—or to put it conversely, regularity of the bowels—the array would be as numerous as there is cell proliferation at the very second that pregnancy is established. Some women have daily evacuation of the bowels, others every two or three days while others are content to release the intestinal real estate but once a week. These variations are known to all of us. After determining the occurrence of bowel movements the next link in the chain to test is what constitutes elimination? Many persons believe the passage of a difficult, inspisated stool each day provides the required elinmination for the body. It is clear there is no distinction made between evacuation and elimination, a very necessary difference for the man doing maternity work to appreciate and put into execution. Then comes the question what constitutes constipation? To respond to this query I prefer to give my interpretation of what is elimination for the pregnant woman? No less than two and if possible, three alvine movements per diem, allowing the first movement to

evacuate the rectum, the second and third sweeping the effete material from the entire course of the transverse and descending colon. Has any physician, who has taken the time, failed to palpate a mass or elicit tenderness over the colon in cases of constipation? If palpation fails surely percussion will yield the cardinal points of a distended and full colon.

No doubt a number of you would like to interrupt at this juncture to ask if fecal stasis is so common in the prgnant woman why don't all of them have eclampsia? There would be but one way of settling the dispute and that would be by asking how often do we fail to recognize autotoxemia? It is my belief that much of the nausea and vomiting of early pregnancy is the end-result of autointoxication and upon successfully evacuating the colon the condition clears spontaneously—in other words, more attention to the hygiene of pregnancy and less dependence upon drugs, serums, etc., in treating such cases, is a master stroke toward efficiency. It might be added in this connection, it is for the purpose of detecting these fine—yet essential—points that the pregnant woman should be examined at frequent intervals as it is utterly impossible to even glean this information from a phone conversation or from a report by the husband or from a urinalysis.

The theory of focal infection is so widely discussed in every branch of medicine that its potential significance in the causation of eclampsia is worthy of profound respect on the part of the obstetrician. It is the custom of the writer to have all seats of chronic infection explored and properly handled, if obstetrical circumstances permit, as soon as a case is accepted. Permit me to briefly report a case that clearly demonstrates why my convictions are formed relative to fecal stasis and focal infection being responsible for a case of eclampsia with convulsions. The patient, my sister, was first confined in May, 1914. The case ended uneventfully save for a luxurious crop of furuncles that were confined to the lower part of the back and the entire buttocks. In August, 1916, the second pregnancy was ended but on this occasion postpartum eclampsia ensued accompanied by the same record breaking crop of furuncles, in the same location. Indeed, the nurse counted 95 boils in all. Having been called to her bedside in Anniston, Ala., I was anxious not only to route the eclamptic condition but to account for the toxemia. The following deductions were formed: (1) During both pregnancies not the slightest vestige of prenatal care was instituted. (2) Examination of tonsils showed these organs badly diseased and (3) the X-ray of the teeth pointed to abscess formation on several. The oral cavity was set in order throughout. In February, 1919, her third pregnancy was terminated uneventfully and it had been my privilege to guide her from the period of convulsions to the hour of the last confinement. For the first time she missed the furuncles. My entire efforts were devoted to preaching the gospel of prenatal care, esepcially that of elimination and I believe the results speak for themselves as well as give me opportunity to grasp the theory of fecal stasis and focal infection.

My faith in the theory that hemorrhages and infarcts in the placenta upset the tranquility of a pregnancy is abiding and devout. The theory, as presented, claims thrombosis in the ovarian and uterine vessels are responsible for these conditions. But what causes the thrombosis? Is it that we must again revert to the theory of focal infection? A hurried review of a case seems appropriate to support my acceptance of this theory.

Mrs. C. ,a nurse and the wife of a physician ran the entire course of gestation most satisfactorily from the obstetrical view point. However, throughout the period she suffered severely from abscessed teeth and an infected antrum. These conditions were treated. One week before expected confinement she began presenting the classical symptoms of an abruptio placenta and at the time a diagnosis was made. Neither the maternal nor the fetal condition called for interference. After three days she seemed improved but when seen at the end of another three days she was in active labor and in the pre-eclamptic state. Blood pressure 180, the urine showing triple plus albumin and many granular casts to the field. Intrapartum and post partum convulsions ensued. Forceps delivery. Living child. The placenta showed area where premature separation had occurred and also presented a large area of infarction, calcification and necrosis. Mother had uneventful recovery. Surely it seems reasonable to conclude that most fulminating toxemias are due to a condition where fetal metabolic products and chorion cells mercilessly and rapidly overwhelm the mother. Did the focal infection superinduce the thrombosis? I readily admit my inability to establish these points beyond peradventure but I will not

concede the argument that the law of circumstantial evidence is inapplicable to medical findings.

A discussion of this character could scarcely be completed without touching upon the methods of treatment. Prophylaxis is the keynote of the rationale of the treatment and it may safely be remarked that when the layman becomes sufficiently educated to know what to demand of the guardians of health and life, at this particular period, the present day appalling maternal morbidity and mortality statistics will approach zero as a coefficient.

Without the least trepidation or timidity I contend that all profound eclamptic conditions with convulsions are attributable to one of two agencies—the physician or the patient herself with the sin of neglect glaring at the ignorant or the indifferent or the procrastinating party whichever one it may be. Why not start today instructing young girls to consult a physician soon after marriage that they may be told how to protect themselves in case pregnancy ensues? Let us begin today to stamp out the absurdity of trying to conceal the truth of a pregnancy if such a step endangers a life. Let us be the champions of safety first measures. Our initiative will be but the father of public demand.

The problem of handling eclampsia with convulsions is of too broad a scope to dispose of in this paper. This point is assuming considerable proportions among the obtsetricians throughout the country. Indeed, the trend of opinion may be summed up as follows: avoid all operative procedures calculated to produce unusual trauma and shock in a patient who is already so shocked as to be a highly sensitized barometer. All are agreed that prophylaxis is our sheet anchor in this fight.

In conclusion, I beg leave to call your attention to what seems to me a most promising feature in the entire study of the toxemias of pregnancy. In supporting the mother, to a maximum degree and maintaining the index of her resistive powers at 100 per cent. during pregnancy what will be the effect upon the offspring? Is it rank heresy to assume that its resistive powers will be uninfluenced? Would it call forth severest condemnation from fellow practitioners to hold that maternal potentialities are fetal potentialities? For some time past I have been interested in making observations along these lines and in the future I hope to present data that wil be wholesome thought for the pediatrician if not for the obstetrician, from labors in special obstetrical fields.

To Recapitulate:

(1) Of all theories advanced as to the causative factors of toxemias, with or without convulsions, those of focal infection, fecal stasis and transplacental or autolysis of the placenta seem to promise the most fertile fields for investigation.

(2) If the nature of the toxins cannot be determined isn't it a wise move to work on the other horn of the dilemma which deals with elimination?

(3) Promote the resistive powers of the woman so that emergencies may be successfully combated.

(4) Establish the distinction between evacuation and elimination.

(5) Discourage indifference but encourage a solicitous regard toward pregnancy.

(6) Consider fetal potentialities in the study of eclampsia.

(7) Fulminating toxemias are apparently more often associated with some disturbance in the placenta than are the milder forms of toxemia.

(8) No physician should dismiss a case of eclampsia before determining the apparent cause of the condition and this opinion must be the aftermath of bona fide, searching conclusions.

The Woodward Building.

Slow Convalescence.

The strong, virile, robust individual who emerges successfully from the attack of the pneumococcus, the bacillus influenzae or the mixed infection of typhoid, is more than like to recuperate rapidly from the depressing effects of the systemic disease from which he has suffered, and his convalescence will be prompt and uninterrupted. It is not so however, with the patient, whose vital resistance was at a comparatively low ebb before the disease invasion. In such cases, tardy convalescences is the rule, unless active measures are taken to revitalize the blood and thus restore and repair the essential solid elements—the red cells, and the oxygen-carrying hemoglobin. Pepto-Mangan (Gude) performs just this necessary service by furnishing the needed organically combined iron and manganese to build up the blood forming functions of the organism. It can also be depended upon to improve the appetite and act as a general tonic, and reconstructive, without deranging digestion or causing constipation.

HONOR TO WHOM HONOR IS DUE

In Memoriam Crawford W. Long, M. D., of Jefferson, Jackson County, Ga.

By William Lane Lowder, B. S., M. D., Tipton, Indiana.

The first man in the world, to whom belongs, the honor of using anaesthetic inhalation in surgical operations.

The names of Long, Jackson, Morton, wells,
Will live as long as suffering mankind dwells
Within this weary world of death and funeral knells;
Or health hath her charms, or the human bosom swells.

The city of Boston, Massachusetts, is justly proud of its "Ether Day" celebration, which, commemorates the operation performed on October the 16th, 1846, at the "Massachusetts General Hospital" by Doctor John Collins Warren, upon the patient, Gilbert Abbot, who was anaesthetized with ether, by William Thomas Green Morton. The day marked the first successful demonstration of the use of sulphuric ether as an anaesthetic in surgical work, but the story of the original conception of surgical anaesthesia and its final acceptance by the world, is filled with bitterest controversy. From a careful examination of all records accessable, throwing any light whatever on the use of anaesthetic inhalation in surgical operations, the "honor" of making the "first trial," undisputably belongs to Doctor Crawford W. Long, a respectable and honorable "country doctor," then living at Jefferson, Jackson County, Ga.; who in March 1842, removed painlessly a small tumor from the neck of James M. Venable, anaesthetized by sulphuric ether. He seems to have performed at least eight minor surgical operations during the next four years (1842-46) upon patients under the influence of ether. Doctor Long is necessarily deprived of the larger honor, which would have been his due had he not delayed publication of his experiments with ether until several years after the universal acceptance of surgical anaesthesia.

It is also to be regretted that his published details of the mode of administering of the ether and the depth of the anaesthesia are so meager and unsatisfactory.

Looking Backward.

In looking over the history of that happy revolution produced by the discovery of anaethesia, we can not refrain from being warned against depreciating "new ideas" by noticing how "sadly slow" men are to "take hints" which Nature gives to them of her very "choicest treasures" of resource. Why did not some one act upon what Sir Humphrey Davy so long before learned and imparted about the properties of nitrous oxide? The key was already there, but not until many years afterward did an almost casual hand (that of Crawford W. Long, a county doctor), fit it into the golden door, behind which sat waiting an Angel of Pity, kinder and more powerful than any Arabian Fairy suddenly revealed in all her divine beauty and bountifulness, to any Prince or Magician of the "Thousand and One Nights." Is there anything in the compass of human history, that more sternly teaches that man must win every boon of Nature by his own ceaseless striving, than that this simple chemical and physiological secret of anaesthesia should have lurked so sadly long in its easy formula, and undeciphered through all those waiting years, when, Pain was an "omnipresent tyrant" whom Science could not abate nor control ,and the

Operating-room,
A torture-chamber

dreaded almost as much by the surgeon as the sufferer?

Lips that blanch not in the reeling strife
Turn white and silent from the surgeon's knife.

Thus, sang a poet, prior to the discovery of anaesthetics. Today the patient passes fearless of the keen glittering steel, into that world of black velvet tranquility, of which our magic drugs now "keep the gate;" to awaken as good as healed, grateful beyond words for the soft spell of enchanted peace.

Thus happily now the fierce extremity of suffering has been steeped in the "waters of oblivion" and the "deepest furrow" in the "knotted brow" of "agony" has been smoothed away forever. Who would not have rather been the discoverer of anaesthesia than have won an Austerlitz or a Waterloo? All honor to Crawford W. Long of the sweet "Sunny South," whom

God enabled, a "slumber" to discover,
That ev'ry pain annihilates forever.

Alas! If Ambrose Pare, Louis Dessault, Cheselden, Hunter and Sir Ahtley Cooper were permitted to see what our eyes daily witness, how would they, eager, long to come among us and perform their exploits once more.

I care not, Fortune, what you may, me deny;
You, from me, can not steal free Nature's grace;
You can not shut the windows of the sky,
Through which Aurora shows her shining face;
You can not bar my constant feet to trace
The woods and lawns, by living streams at eve;
Let health my nerves and finer fibers brace,
And I, Fortune and her fickle toys, to the great will leave.

Biographical Sketch.

Crawford W. Long was born in Danielsville, Madison County, Georgia, November 1st, 1815, and died June 16th, 1878. Doctor Long received his literary education at "Franklin College" from which he graduated with the degree of Bachelor of Arts in 1835, and, later attended medical lectures at the "University of Pennsylvania," graduating therefrom with the degree of Doctor of Medicine in 1839.

He first located in the general practice of medicine at Jefferson, in his native State, for the next twelve years, and removed to Athens, Georgia, in 1851, where he continued in the general practice of his profession until his death—June 16th, 1878—in his sixty-fourth year.

Valediction.

Beneath an humble monument sleep the mortal remains of Crawford W. Long, one of the greatest benefactors to suffering humanity, the world has ever known.

Sit Tibi Terra Levis.

(May the Earth Lie Lightly Upon Thee)

On and on—yet on and on he rides.
Doctor Crawford W. Long! On, on he rides across the Tape of Time!
Beyond the waiting watchman's tower where somber shadows silent climb.
Beyond the text and epitaph, beyond the inviolate waves and unrelenting tides,
Where most men welter in a maze, but on—yet on and on he rides!

On, beyond the mart and cheering throng, beyond the stretching waste of the murm'ring sea
On, beyond mortal view, just cover'd by the "dreamless dust" of undying victory.
Yet on! He rides! Though tongues are mute along the path he noiselessly glides.
Across the "reaches" of the years—beyond the realm of mortal mind, on and on he rides!

With master hand he guides his steed through seering scoff and frightful fears.
The whining censor bows his head, the honest critic inwardly, unconscious cheers.
His flaming guidon "points the path" and yet his legion ever faithful, safely guides
Where kindred spirits rendevoux. He rides, yet on, and on, and on he rides!

Lenvoy.

No swerving from the path he chose, no fear of law, of threat or ban,
He rides in splendor on his nightly call, to serve the cause of his brother man.
And he, who follows, weak in flesh, to him a comforting voice confides:
"To boots and saddle and away to where your pioneer—your champion rides!"

Epitaphium.

On the starry-pointing temple of Eternal fame,
Were we permitted to carve another name,
To treasur'd be, in Story and in Song,
"'Twould be that of a country doctor, Crawford W. Long.

Lenvoy.

Not above, nor below, the names of McDowell and Sims, would we carve it,
But with unerring chisel, just opposite the two—'grave it!

Reconstruction After Protracted Illnesses

Following a protracted illness the system is left depleted of strength, and the urgent indication is for an agent that will add richness to the blood-stream and put fresh vitality into the tissues.

For this purpose cod liver oil is of the utmost service combining as it does the qualities that make the ideal reconstructive. But the gastric function has been impaired too, and plain cod liver oil is not well tolerated. Hence a palatable preparation of cod liver oil must be selected, and there is none better than Cord. Ext. Ol. Morrhuae Comp. (Hagee). Containing all of the therapeutic and nutritive essentials of cod liver oil, Cord. Ext. Ol. Morrhuae Comp. (Hagee) is palatable in a high degree and is tolerated by the weakest stomach, a feature that makes it of exceptional value in states of general debility such as those following a protracted illness. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is everything that plain cod liver oil is except disagreeable.

IMPAIRED LIFE INSURANCE RISKS.

By Dr. J. H. Florence, Vice-President and Medical Director, Atlas Life Insurance Company, Tulsa, Oklahoma.

The word impaired means in life insurance parlance the same as when used in any other connection in the English language, namely: diminished quality in excellence, value or strength. In a measure, it is used in reference to the physical condition, moral or occupational hazard. In other words, his chances of living out his life expectancy are doubtful although in many cases the impairment existing, past or present, may not exclude his being issued a policy on some form, and when sold on this class of cases is called "Sub-standard." And it is thus explained: he pays a higher rate than his normal fellows to even up the shortage either from previous or present diseased conditions, results from drink or following an occupation wherein life and limb are in danger from accidents or from the nature his calling will eventually lower his vitality, sap his strength, shorten his life and in many other ways render him an undesirable risk.

It is not uncommon to charge a higher rate for those living in unhealthy localities or amid insanitary surroundings. Rest assured premiums for life insurance are loaded for all these conditions. In other words, unless a man be doomed for an early death there is a policy and a rate commensurate with the added risk or hazard in his case.

Actuaries and Medical Directors have recently conjointly compiled statistics extending over scores of years and have worked out and arrived at oconclusions upon which a sub-standard rate can be based and the applicant safely insured as far as the company is concerned. These statistics are mathematically correct and simplifies the handling of impaired risks. Of course, the Medical Director must know that he has the exact facts before him, hence so much depends upon the local Medical Examiners' examination and report. Of recent years a few companies have special departments for and cater to this class. Many other companies consider them as they come in the regular routine of daily business. However, the majority of companies will not write what is called "sub-standard business."

I will mention briefly a few of the impairments that come almost daily to the Medical Director's desk.

Alcoholics—Past or Present.

Volumes have been written on these risks and it is all but impossible to place a rate upon them with safety to the company. Liquor with its myriads of ramifications that impair health, lives and morals cannot be guaged with any certainty as to the final results on longevity. It is also utterly impossible to ascertain the exact amount drank and its effect, so they are a class to let alone.

Syphilis.

A company who issues on this class, more or less, gropes in the dark, as it is doubtful if you get facts, especially as to the amount and kind of treatment the applicant has had and the ravages the disease has made, which is even beyond the skill of the very best diagnosticians. However, a case that has had thorough treatment for several years, a man who takes care of himself, is intelligent, and leads a moral life, a policy to mature before 50 years of age is often issued.

Here I wish to state the requiring of a Wasserman or other tests in these applicants is not practical and wholly unreliable.

Sugar.

An applicant with a history of sugar in the urine in the past, say occasionally found, the mortality is high and policies are sometimes issued on the most favorable cases at an advance in age on high-priced policies.

Albumen.

When found at the time of the examination, no casts, blood-pressure normal, and the applicant not an over weight, a policy can be given at say a rating up in age from 1 0to 12 years. However, this rating is empirical and somewhat guess work.

Blood Spitting.

Where there are no other tubercular symptoms, and five years have elapsed, a rated up policy can be issued upon a basis of reckoning the mortality to be in such cases of 150 per cent. of the expected. Every other factor as to the family history, occupation and surroundings must be favorable.

Heart Murmurs.

When the murmur is slight, well compensated for and other points favorable, there is a premium to charge to take care of the hazard. They are usually rated five to ten years raise in age. However, other than mitral are not issued upon.

Pulse.

The death rate in irregular pulse cases is within the normal.

The mortality in cases of intermittent

pulse is about 13 per cent above normal.

You will be interested to know that in cases of fast pulse, say 90 to 100 and over, the mortality is 172 to 205 above the expected.

Gall Stones or Hepatic Colic.

Say one attack in five years, the ratio of actual to expected deaths was 130 per cent., are insurable, but it is doubtful if they are if repeated attacks or under five years since the one attack.

Renal Colic or Calculus.

The mortality is high and cannot be issued upon with safety, if repeated attacks have occurred. If only one attack has occurred and five years have elapsed the mortality approaches normal. In repeated attacks, unless the applicant is almost uninsurable, some companies accept at a rating almost prohibitive in price.

Fistula in Ano.

Most companies, regard these cases even when cured for years, as tubercular. No one takes them when the fistula exists. If several years have elapsed, and the case is favorable in every other respect, especially no tubercular family history, a standard policy can safely be issued.

Asthma.

As a general rule this is considered, in a measure, with a suspicion of tuberculosis; at any rate, the mortality is high, taking them as a class.

Overweights.

This is a subject that gives actuaries and medical directors much concern. The mortality has been exceedingly high, in fact, beyond all expectations. The applicant whose weight is 20 per cent. over the normal, age over 40 years, especially an indoor or desk man, a heavy eater and drinker, with an abdominal measurement greater than his chest, is now considered a most hazardous risk, and only in favorable cases can any kind a policy be issued.

Underweights.

This is a fairly good class after 35 or 40 years of age, especially if the family history is clear of tuberculosis and the applicant is an out of door worker or lives in the open. However, they are a dangerous class of risks prior to 35 years of age and if too far below the normal weight.

Tubercular Family History.

Strict attention is given to these risks in early ages, that is, prior to 30 years, especially if the applicant is light weight and leads an indoor life. If the disease occurred in the father or mother, and applicant is otherwise favorable, in the younger years a rated up policy is issued. Each case is handled on its own merits, however, actuaries do not approve any method other than passing upo cases as a class.

Lack of Longevity.

This refers to family history. It is not uncommon to find a majority of applicant's family died around 50 years, showing a lack of resistance to disease and of ital stamina. These cases are often given extra rating or a policy maturing at or around 50 years of age.

Environment.

There are localities where certain diseases are present at all times such as malaria on the rivers or near the swamps in the Southern States. These risks could be carried on a sub-standard rate, but as a rule Life Insurance Companies do not write in these localities. But for parts of Mexico, Central and South America they have what is known as a tropical or semi-tropical rate on account of yellow fever, Bubonic plague and other tropical maladies, also lack of hospital facilities and medical attention.

Occupation.

Numerous occupations demand a high rate; some on account of accidents and other causes, such as those who labor in dust, certain metal and paint workers, miners, operating crews of railroads, those who work with high voltage electricity; in fact, all occupations by the very nature of which shortens life or renders them easy victims to disease or accidents.

This is a wide subject but very interesting, yet it may appear dull and unimportant to those whose daily life and medical practice does not bring them in touch with these questions.

There are a number of other impairments and hazardous conditions that could be enumerated but time and space forbid. Bear it in mind, however, in selecting impaired cases or those following hazardous occupations only the very best and most favorable cases are to be selected and issued upon.

The above figures and estimates may not be strictly actuarially correct, but in the main it gives an idea of the classification and rating of impaired lives and hazardous risks.

In passing, I wish to say the sheet anchor of safety is the local Medical Examiner. Not only in the examination of sub-standard cases but in all others. The conscientious, careful, and painstaking local examiner will always give courtesy to the agent, a square deal to the applicant, an dto the company the benefit when in doubt.

A PRACTICAL DISCUSSION OF DIABETES AND THE ALLEN TREATMENT.

By W. W. Blackman, M. D., Superintendent Robertson-Blackman Sanitarium, Atlanta, Ga.

Diabetes Mellitus is now twice as prevalent in the United States as in 1900. These figures, discouraging on their face, are more than balanced by the fact that during the past five years, Dr. Frederick M. Allen, of the Rockefeller Institute Hospital, and his followers have been demonstrating a really satisfactory system of treatment for this important metabolic disorder.

Statistics from the Mass. Gen. Hospital show that the mortality from diabetes has been reduced in 1917 over 1913 from 28 per cent. to 6 per cent. by the methods inaugurated by Allen. This advance in 4 years is unparalleled in medicine and should impel physicians everywhere to master and utilize this therapeutic prize.

Authorities now agree that diabetes is a disease in which the normal utilization of carbohydrates is impaired, in consequence of which dextrose is excreted in the urine, this impairment being due to the deficiency in the internal secretion of the Islands of Langerhans of the pancreas. Joslin unqualifiedly states that if the diabetic patient could secure a new pancreas he would be cured. Obesity, dietetic excesses, heredity and mental strain are recognized contributory causes, obesity easily leading.

Allen holds that dextrose exists in the normal body in a state of colloid combination; as a colloid it is utilized by the tissues, and, like other colloids, diminishes diuresis. It assumes the colloid form in passing through any living membrane, never circulating in crystalloid form in the normal organism. On the other hand, in the diabetic organism, dextrose circulates as a free or very poorly combined crystalloid and in this state, is not available to the tissues and is a diuretic like every crystalloid. When the pancreas is absent or insufficient, dextrose occurs free, and he therefore assumes that this combining substance is furnished by the pancreas and accordingly uses the term "pancreatic amboceptor" synonymously with "the internal secretion of the pancreas" Allen defines diabetes as deficiency of the pancreatic amboceptor.

Sugar in the urine of diabetic patients is derived from food. Most of it comes from carbohydrates, but it is shown that in severe cases as much as 60 per cent. of the protein may be metabolized into sugar. While no sugar is formed from fat, if a diabetic consumes an excess of fat, his carbohydrates and proteins are not well utilized and sugar from these sources is increased. The content of sugar in diabetic urine ranges from a trace to 10 per cent. The daily total may reach two pounds. The blood sugar in health averages 1-10 per cent. and in the untreated diabetic may be doubled or quadrupled.

In fatal cases of diabetes, coma is the final chapter in the majority of instances, due to acidosis from incomplete combustion of fats. Owing to the waste of the carbohydrates which hurry through the body in great part without being stored as glycogen or being burned, the energy must be provided by the proteins and fats. The carbohydrates are not used as fuel; the proteins are easily utilized but apparently it takes so much draught to burn them that not enough is left to completely consume the fats. The products of incomplete combustion accumulate in the system and suffocate the patient, says Osler, as effectually as does the C. O. of a charcoal stove. The chief product of this incomplete combustion of the fats is B-oxybutyric acid, which itself is the source of diacetic acid and acetone. In acidosis the fixed bases of the body are depleted in the early effort to maintain blood alkalinity. Carbonate is lacking to combine with the CO_2 in the tissues. The tissues are loaded with CO_2 which cannot be taken up by the blood. The venous blood is charged with oxygen and is as bright as the arterial. There is dyspnea, or rather hyperpnea, without cyanosis—the most dependable clinical sign of acidosis.

The degree of acidosis may be determined by several methods—by ascertaining the nitrogen and ammonia ratio, by quantitation of the acetone, diacetic acid and oxy-butyric acid excreted, and by estimating the carbon dioxide tension of the alveolar air. Joslin recommends the total ammonia for its comparative simplicity and practical value. The quantity of ammonia elaborated by the metabolism and excreted in the urine is a measure of the reaction of the body to counteract acidosis and maintain blood alkalinity. If the 24-hour total ammonia does not exceed three or four grams the acidosis is not serious. A most remarkable measure of defense of the body against acidosis lies in its power to excrete nitrogen in the form of ammonia instead of urea. Ammonia has 5 times the power of so-

dium bicarbonate to neutralize B-oxybutyric acid.

We may now turn at once to those considerations having to do with the application of the Allen method.

The diabetic must be rendered and maintained sugar-free, not only because his symptoms are thus abated, but also because the power of his pancreas to promote assimilation of carbohydrates is thus markedly increased.

The treatment has been divided into three stages:

1. The stage of starvation, lasting one to three days or perhaps four, when the patient is becoming sugar-free.

2. The stage of gradually working the diet up to the limit of tolerance, under daily laboratory surveillance.

3. The stationary stage, when the diet is kept at a constant level. At this stage the patient is, in a limited sense, cured. He stays within his means as regards scope of alimentation and goes about his usual affairs.

Upon entrance the average diabetic patient is observed for two days from the clinical and laboratory standpoints under the conditions of his previous manner of living. After a physical examination, note is made of his symptoms as regards thirst, polyuria, skin manifestations, vision, gravity, percentage of sugar, diacetic acid, total ammonia excretions and any other presenting points of interest.

The stage of starvation may be inaugurated abruptly, the patient receiving only clear broth and tea or black coffee at the meal hours and water as desired.

Formerly, it was the practice to endeavor to get the patient sugar-free by the reduction of carbohydrates in the diet, at the same time immediately increasing the fat and protein to make up for the calories thus lost.

Various dangers attended this practice including the aggravation of acidosis, and, at present, it is generally abandoned. The urine is rendered sugar-free by fasting as above in the mild or moderately severe case while in the severe, complicated, obese or elderly case or that with definite acidosis it is brought about by the withdrawal of fat, from the diet and the subsequent reduction of carbohydrates and protein to a point at which sugar vanishes. After two days omission of fat, protein is withdrawn and then the carbohydrates are daily halved till fasting is reached unless sooner sugar-free. By the Allen Method alkalies are unnecessary to combat acidosis, and, in the belief of Joslin, do harm. Our cases, in which fasting was resorted to at once in nearly all instances, have seldom fasted more than 48 hours, never more than 72 hours. Patients do not complain of hunger, and the thirst and polyuria gradually subside. They are allowed as much latitude in the respect of exercise and diversion as they desire. Joslin remarks that it is a surprising fact that a urine which contains 7 per cent. of sugar may become free after fasting for four meals and one containing 3 per cent. may still retain traces of sugar after fasting 3 or 4 days. He believes that cases presenting acidosis invariably require longer to become sugar-free.

The patients tolerate the modified fast remarkably well. There is usually a loss of 2 or 3 pounds, and Allen says that a moderate loss of weight is desirable; that a moderately obese patient, weighing 180 pounds, may continue to excrete a small amount of sugar for a considerable period if he holds his weight, even if he is taking very little carbohydrates, whereas if his weight can be reduced to 170 or 160, he can be kept sugar-free on the same diet. "Reduce the weight of a fat diabetic and keep it reduced."

It is a fact not well understood by students of metabolism that whereas a healthy individual, fasting, develops an acidosis, a severe diabetic, fasting, loses an acidosis.

The possible pre-existing acidosis is usually lessened rather than increased during the fast, and is cleared up later when carbohydrates are given and the fats kept down.

When the urine becomes sugar-free a graduated series of ascending daily diets its initiated, constituting the second stage of the treatment.

We have had great satisfaction with the diet tables used at Massachusetts General Hospital. They follow accurately the ideas of Allen and Joslin, are simplified in their measurements, and may be had in printed form.

Carbohydrate foods are classified into the 5, 10, 15 and 20 per cent. groups. All foods are carefully weighed or measured; their contents of carbohydrate, protein, and fat expressed in grams, and their caloric values computed.

It is during this transitional stage that the service of an experienced diet nurse is most valuable. Her familiarity with the preparation and measurement of prescribed articles of food and with the alternative foods with which she may vary the regimen from day to day without upsetting the proportions and total, is a

great help to the patient and physician.

In the early days of the second stage of the treatment of severe diabetic cases Allen directs that the vegtables be finely divided and thrice boiled, each time throwing away the water. By this procedure more than half the carbohydrate is washed out and the patients are allowed to have bulk in the diet.

In health the diet calories are made up as follows:

Carbohydrate 4-7, Protein 1-7, Fat 2-7.

In the low diabetic tables they are, roughly:

Carbohydrate 1-5, Protein 2-5, Fat 2-5, while in the liberal tables they approximate:

Carbohydrate 1-8, Protein 2-8, Fat 5-8.

The decrease of carbohydrates must be compensated by increase in the fats. If diacetic acid and ammonia should at any time appear in disquieting amounts, fats must be curtailed. In anything like a serious manifestation of acidosis it would be justifiable to exclude all fats and to give several oranges daily, regardless of a possible temporary return of sugar. The diet of the diabetic should contain, except for brief intervals, the minimum number of calories which the normal individual of the same weight and activity would require. If more is allowed there is great likelihood that a portion will be unassimilated and appear as sugar in the urine.

The dietetic steps to be followed in stage two may be best set forth by citing an illustrative case which I shall presently do. At this point I wish to touch upon the hydrotherapy, physical exercise, and mental hygiene of this phase.

The efficacy of hydrotherapy in diabetes is not accorded the recognition it deserves. Judiciously used, it is of demonstrated value. Mild sweating baths are indicated for the toxemia of faulty metabolism, and should be followed by graduated cool and cold douches and sprays to produce exhilarating reaction and enhance oxidation. For the robust patient then to take a brief vigorous swim in a pool at 72 degrees is excellent therapy. Fomentations, given daily over the abdomen, are calculated to activate the pancreatic functions in the very positive way in which they affect the other digestive organs, and, I am sure, have contributed much to my success in rapidly raising food tolerance, as in one case from 700 calories to 2,300 calories.

Exercise of the muscular system is important in the diabetic, increasing oxidation and metaboism as nothing else can do, and improving the muscles themselves. It is only natural to conclude that if the muscles, in which is stored one-half of the carbohydrate of the body, are kept in good condition by training, a favorable effect must be exercised upon the general metabolism of carbydrate. Gradually increased exercise is begun at once with all patients, except those unduly weak, or in dangerous condition. The effects of their walks and swimming are pronounced, and are shown not alone by freedom of the urine from sugar with an increased carbohydrate tolerance, but by improved circulation and general well-being. A physician in an eastern sanitarium told me of a robust patient who had a slight recurrence of sugar that day, and that he had threatened to reduce his food allowance. The patient protested and was given another day of grace upon agreeing to run up and down three flights of stairs three times, in addition to his usual exercise. On the other hand, the diabetic must not overdo physically. He should not get tired, and he must have an abundance of sleep, and a midday rest.

Joslin gives consideration to the mental frame of the diabetic. He enjoins his patient to forget that he has diabetes and to refrain from talking about it. He says this is one reason for not using saccharin and another is to avoid the perpetuation of a sweet taste thus reviving the thought of the previously unrestricted diet. Mental depression is quite characteristic of the untreated diabetic, and improved spirits a marked result of good treatment. Mental diversion is desirable, anxiety is harmful. "It is almost as undesirable for a diabetic to get angry as for a man with angina-pectoris. He should keep cheerful and occupied, and, as far as possible, continue the previous current of his life."

What follows is a summary of the dietetic management of a mild diabetic case, selected for its brevity.

A man, age 45, weight 154 pounds (70 kilograms), gave a history of glycosuria of two years, two gangrenous toes 1½ years, loss of 25 pounds in weight, thirst, polyuria, and loss of sleep due to aching of the legs. The physical examination presented nothing of interest except the gangrenous toes. The urinary report at entrance was: 24 hour quantity, 70 ounces, gravity 1.038, sugar two per cent., diacetic acid present, total ammonia two grams.

He was given only clear broth and black coffee three times a day for two days; when he was found sugar-free and the acidosis subsiding and the second stage was entered upon.

On this day he received three meals like those above plus, at each, 50 grams or one heaping tablespoonful of cooked 5 per cent. vegetables.

On the second day the same with three heaping tablespoonfuls of five per cent. vegetable instead of one.

On the third, fourth, and fifth days each meal consisted of two heaping tablespoonfuls of each of two five per cent. vegetables plus an egg at breakfast and supper and between two and three ounces of steak or chicken for dinner. On this fifth day he was getting 39 grams of protein, and will later get 70 grams or one gram per kilo of his body weight. He was getting 16 grams carbohydrate or one-fourth his later due and only 22 grams of fat or one-seventh of that ultimately designed.

On the sixth and seventh days he was given 659 calories or one-third his due nutrition; the protein reaching five-sevenths, the carbohydrates one-third, and the fats one-fourth the contemplated goal. This table is as follows:

Protein, 50 grams
Carbohydrate, 20 grams
Fat, 40 grams

Breakfast:		
Egg	1	
String beans	125 grams	(2¼ h. tbsp.)
Cream		(1 tbsp.)
Coffee		
Ten a. m.:		
Orange	50 grams	(½ small)
Dinner:		
Broth		
Fish (cod)	125 grams	(1 med. serv.)
Brussels sprouts	100 grams	(2 h. tbs.)
Olives	20 grams	(5 small)
Butter	5 grams	(½ small sq.)
Tea		
Supper:		
Egg	1	
Egg white	1	
Spinach	100 grams	(2 h. tbsp.)
Butter	5 grams	(½ small sq.)
Cream		(1 tbsp.)
Tea		

On the 8th to 10th days inclusive a table representing 743 calories was given, the protein being increased to 6-7, the carbohydrates to 1-2 and the fats to 1-4, the fats being conspicuously held back.

For the next 8 days consecutive tables are given, rising from 795 calories to 1,850 calories.

In this series the protein stands at the maximum of 70 grams or one gram per kilo of the body weight, the carbohydrate remains between 1-2 and 2-3 of the limit, but the fats increase from 41 to 151 grams per day, or almost four-fold, and reach their maximum.

The total ammonia was but one gram. Sugar had not reappeared and diacetic acid reached the vanishing point on the 15th day. There was no return of sugar at any time. If sugar had reappeared a fast of one or two days would have been demanded, and we should have then gone back to a lower table for two days before retracing our course.

We had now reached a day's menu of 1,732 calories as follows:

Protein, 72 grms
Carbohydrate, 35 grams
Fat, 139 grams

Breakfast:		
Apple	50 grams	(½ small)
Bacon	50 grams	(2 slices 6 in. long)
Eggs	2	
Asparagus	100 grams	(2 h. tbsp.)
Cream		(2 tbsp.)
Butter	5 grams	(½ small sq.)
Coffee		
Dinner:		
Lamb chop	100 grams	(1 chop.)
Peas	100 grams	(2 h. tbsp.)
Radishes	50 grams	(5 radishes.)

Coffee jelly made with:
1 level teaspoon gelatine
8 tablespoons coffee
½ grain saccharine
Cream (1 tbsp.)
Butter ..... 5 grams (½ small sq.)
Tea

Supper:
Bacon ..... 50 grams (2 slices 6 in. long)
Eggs 2
Beet greens ..... 100 grams (2 h. tbsp.)
Apple ..... 50 grams (½ small apple)
Cream (1 tbsp.)
Butter ..... 10 gra ms (1 small sq.)
Tea

From the 19th to 23rd days, the carbohydrates were increased to their estimated full amount, while the protein and fat values remained the same, and an adequate ration approximating 2,000 calories reached. On the last day his menu was as follows:

Protein, 69 grams
Carbohydrates, 61 grams
Fat, 153 grams
Calories, 1,955.

Breakfast:
Strawberries ..... 100 grams (2 h. tbsp.)
Eggs 2
String beans ..... 100 grams (2 h. tbsp.)
Potato ..... 50 grams (½ size large egg)
Butter, cream, coffee.

Dinner:
Broiled ham (medium fat) ..... 100 grams (1 med. help.)
Potato ..... 50 grams (½ size large egg)
Cucmbers ..... 100 grams (2 h. tbsp.)
Lettuce ..... 50 grams (5 medium leaves)
Butter, cream, tea.

Supper:
Eggs 2
Canned salmon ..... 50 grams (⅛ can)
Cauliflower ..... 120 grams (2 h. tbsp.)
Rhubard ..... 100 grams (2 h. tbsp.)
(sweetened with saccharine)
Butter, cream, tea

Allow during the day:
Butter ..... 40 grams (4 small sqs.)
Cream ..... 6 oz. (12 tbsp.)
Lemon Juice ..... 3½ oz. (7 tbsp.)

This patient proved to have acquired a tolerance beyond this adequate level of calories, and was given, on the 24th day and thereafter the above table plus a thin slice of bread at each meal. Our object had been accomplished and he had reached the third or stationary stage. An active business man, he adhered faithfully and intelligently to his regime and made a perfect report a year later.

The patient should by this stage be schooled in the management of his own diet and, if he has grasped the importance of it, and if he possesses the required moral stamina to carry it forward, his future is safe.

I could give many records of cases treated by the Allen method at the Sanitarium during the past 3 years, but they would involve tiresome repetition. Suffice it to say that I have found in it a highly practical and satisfying solution of the erstwhile therapeutic bugbear—Diabetes. If you have not utilized it, I commend it to your consideration.

Mercurial Injections in Sodoku.—Borelli having in mind the supposed sprochetic nature of this affection, has tested injections of sublimate in the attempt to ascertain if the well known tendency to exacerbation is favorably influenced. The results appear to have exceeded anticipation, so unmistakable were they in this regard. However, the ultimate state of to be determined.—Il Policlinico.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

THE SIXTY-SIXTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF NORTH CAROLINA.

The sixty-sixth regular annual meeting of the Medical Society of the State of North Carolina was held in Pinehurst, N. C., April 15, 16, 17, 1919, under the presidency of Dr. Cyrus Thompson, Jacksonville, N. C.

To say it was a successful meeting expresses the facts but mildly, it having been unquestionably one of the finest meetings the fine old society of North Carolina doctors ever held. The things that go to make a successful meet were all strikingly in evidence. The president, Dr. Thompson, is unquestionably a gentleman of very marked and striking personality, a clever physician, a close student of men and their affairs, an admirable illustration of the highest type of general practitioner of the South who is a student of not only the diseases of men, but an equally apt discerner of the things that go to make man's environs good, bad, or worse. Dr. Thompson may be truly characterized, a doctor-statesman of the old school—and by that term is not meant a conveyance of the idea that he is not thoroughly conversant with the advancing trend of modern medicine, but the idea is to convey the thought that he is a diagnoser of his profession, one of that most interesting type of medical man able to discern the true from the false, to effectively discriminate between the passing profession fad and the genuine contribution to science. His President's Address, "The Art of Living," was literally a masterpiece, viewd either as literary endeavor, or as a medical classic, which is its appropriate rank, and adds another to the several very excellent annual addresses of our past presidents. It is safe to say, few have equalled it in its finer qualities, none have surpassed it.

Dr. McBrayer, acting Secretary-Treasurer, Vice Capt. Menj. Hays still in the army, achieved a success in arranging a very complete and markedly attractive programme and is deserving of congratulation in setting a high pace for future secretaries to meet.

Mr. Leonard Tufts, our genial host at the Carolina Inn, that most attractive of Southern hostelries, was gracious in his welcome, and his elegant hotel cared for the comforts of the inner and the outer man in a way that, the two consecutive annual meetings of the society attest, can never be beaten in any other town. From beginning to end, each day, one constantly heard expressions of pleasure at the very satisfactory hotel accommodations set before us. Lt. Col. John T. Burrus, High Point, just returned from service, was in felicitous frame of mind in his reply to the address of welcome and delightfully expressed the pleasure all experienced in being again in beautiful Pinehurst and Mr. Tufts' guests at the charming Carolina Inn.

The different sections were kept quite busy, and with the large number in attendance, there was ample members to comfortably occupy the space in each section when in session. At one time no less than four meetings were in progress at the same hour, each having a good membership present. No mention was heard of changing or cutting out any of the sections.

The visit of Gov. T. W. Bickett, our popular chief executive, was well timed, much appreciated, and his address detailing in graphic forecful way the various enactments during the two sessions of the legislature since his induction into the gubernatorial chair, exhibited fully his well known keen intrest and deep concern in everything advocated by the medical profession for the betterment of public health conditions in North Carolina. Few states may boast of having a governor of his ability, not one, either now or in past days, have had at the helm his superior. His grasp, ready and quick always too, of the intrinsic merits of every measure calculated to better the condition of the people of his state, is a constant source of both pleasure and wonder to his admiring constituents from the mountains to the sea.

Many excellent papers were presented to the sections during the meeting, and it is safe to say the scientific work will easily rank with the best of previous meetings.

The State Health Officers' Association met on oMnday prior to the Society's meeting, and was well attended. Its one day's exercises were presided over by the president, Dr. J. R. McCracken, Waynesville, N. C., whose address portrayed in well chosen language "What the State is Doing for her Unfortunates." One desiring up-to-date information as to the various eleemosynary institutions con-

ducted by the state of North Carolina can find excellently arranged, the facts with helpful suggestions in some instances for betterments. The various state, county, and health officials from every part of the state were well represented at this important meeting, and the papers and discussions were of a very high order, helpful, and promotive to a degree of more knowledge of fundamentals and practical details of application too, of a number of public health problems and policies now in the professional and public eye. "Venereal Disease Work in North Carolina," by Dr. James A. Keiger; and "The Control of Diphtheria," by Dr. W. S. Rankin, were two especially helpful addresses. The address on "Infant Welfare Work," by Mrs. Kate Brew Vaughan the recently appointed Chief of that Bureau in the State Board of Health's activities, was timely, pertinent, well delivered, and much appreciated. Mrs. Vaughan is accomplishing a great and enduring work, and the wisdom of the State Board in adding this new bureau is already manifest.

Officers were elected for the Health Officers' Association as follows:

President—Dr. E. F. Long, Lexington.

Vice-President—Dr. Carl V. Reynolds, Asheville.

Secretary-Treasurer—Dr. G. M. Cooper, Raleigh.

The 1920 session will, as usual, meet a day in advance of the State Medical Society.

The North Carolina State Hospital Association, organized by a number of leading medical men of the state a few months since, also held its annual session in Pinehurst during the sessions of the State Medical Society, under the presidency of Dr. J. F. Highsmith, Fayetteville, N. C. Several excellent papers were presented, and measures taken to secure a proper standardization of the various hospitals of the state. The meetings will be held at the time and place with the State Society, and it is predicted that the influence of the new state organization will contribute to the material bettering of hospitals in North Carolina. Officers elect:

President—Dr. Jno. P. Monroe, Charlotte.

Vice-Presidents—Drs. Jno. T. Burrus, High Point; E. T. Dickenson, Wilson, and Miss E. A. Kelly, R. N., Fayetteville.

The Con-Joint session of the State Board of Health with the State Medical Society was held as usual on the second day of the session, and was well attended. The average North Carolina doctor is recognizing the profession's duty to public health matters and is meeting his full duty thereto. Secretary Rankins' report was instructive and informing, disclosing some interesting facts relative to the recent epidemic of influenza in this state. Dr. Rankin assumed that approximately no less than 1,000,000 persons in the state had influenza with a fatality of about one and a half per cent. Fitting tribute was paid in the Secretary's report to the noble work done by the physicians of the state and notably the 35 who volunteered for service in caring for influenza cases in communities without professional help. 16 physicians died of influenza.

The Society elected Drs. Cyrus Thompson and F. R. Harris to succeed themselves as members of the State Board of Health.

The social diversions of the state meeting were very attractive including an elaborate ball Wednesday evening, drives about the beautiful sandhill section and visits to the Farm Life School, the Memorial Hospital, the State Sanitarium, and other places of interest. An unusually large number of ladies were present and added to the pleasures of the occasion.

The session of 1920 was voted to be held in Charlotte. Officers elect are as follows:

President—Dr. Carl V. Reynolds, Asheville.

Vice-Presidents—Drs. H. D. Walker, Elizabeth City; Stanley Whittaker, Kinston; Thomas J. Fox, Franklinville.

Secretary-Treasurer—Dr. Benj. K. Hayes, Oxford.

DR. CARL V. REYNOLDS PRESIDENT OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

In the election of Dr. Carl Vernon Reynolds, Asheville, N. C., as its president for the ensuing year, the recent session of the State Medical Society of North Carolina honored both itself and the well known Asheville physician. The names of some of the state's choicest medical men were carefully considered for the position by the committee on nominations, and Dr. Reynolds' unanimous selection the result. He and the society are alike to be congratulated. Graduating with honors from the University of New York in 1895 he became immediately associated with his

accomplished brother-in-law and prince of good fellows in the profession, the late Dr. Jas. A. Burroughs of whom it may truthfully be said perhaps no man in the history of the profession in this state ever encouraged more young men to do their best work and to strive continually for the larger things. The association continued to the day of Dr. Burroughs' untimely passing, and the added burden of larger professional responsibilities in the important medical centre of Asheville came to Dr. Reynolds then.

While at present, and from the beginning of his career, he has been actively interested in tuberculosis, it has been his pleasure to, almost from the beginning of his career, be actively connected with the health department of Asheville, and one is safe in saying that no one man in the famous health resort has done any more, if quite so much, to make the city safe and sanitary to a point where health departments, north and south, east and west, have repeatedly sent specialists in the various problems of municipal and sanitary problems to Asheville to study the result attained. In all this fine work, he has been ever a strong resourceful leader though active in his private practice.

Coming to the titular head of the state's medical profession while yet a young man, it is safe to say his administration of its affairs will be characterized by that same careful painstaking intelligent action which has made Dr. Reynolds a leader of capacity in the profession and business affairs of his home city.

THE BOARD OF COUNCILLORS.

The recent session of the State Medical Society at Pinehurst elected a strong board of councillors for the ensuing term which is to be commended as a highly proper move in the right direction. It occasionally happens that a full appreciation of the importance of this office in the plan of state medical society organization is lost sight of to the detriment of the work in the state. Instead of being conferred as a sort of compliment on some aspiring young man, it ought only to be given a doctor well established in his community, and commanding the respect of not only his professional confreres in his immediate community, but who is also known "away from home" as a physician of learning, but as well a man of character. Only this type of councillor can fully rise to the measure of his opportunities, adjust the ruffled places that at times will develop among the brethren, exercise a helpfully constructive influence on the profession and keep the county societies of his district stimulated to the measure of opportunity.

It has been truly said that to be a good councillor entails sacrifice on the part of the physician accepting the position. This is true, and the physician unwilling to spend some of his own money and time in visiting all the counties of his district should never dishonor himself and the society by accepting the position merely as a personal compliment; for it is a position not only of the highest honor in the society, but one possessing opportunities of service which faithfully performed will prove of lasting value alike to the profession of the district and the councillor as well. To assume the state society treasurer is to be called upon for every possible item of expense incurred is to establish a precedent which, if the councillor's work in the several districts is fully performed, will entail a cost the state society can not afford without increasing the dues. Hence it is best to place in this post of honor and responsibility a well established physician who knows the profession in the counties of his district, who is able and willing to go to some of the county society meetings in his district with a joint result of strengthening the forces of organized medicine, and incidentally extending the councillor's official and personal sphere of usefulness. A consultant in one of our largest cities some time ago remarked that from a selfish view point, the post of councillor of the district was the most useful position any doctor could hold—saying that in helping others the councillor unavoidably helped himself. And this too would ensue as a logical seqeunce without the officer attempting to make such use of the position, doctors, as we all well know, do not advertise; nevertheless an opportunity to officially visit the several counties of a district, to meet the various doctors, affords an opportunity of personal benefit that should make the office really helpful to the business opportunities of the councillor, especially if he be a medical or surgical consultant or has satisfactory hospital connections. In saying this it is not meant this ever is, or should ever be the lone desire of the councillor, but it is referred to as pointing out that any properly qualified physician can well afford to accept the honored post of District Councillor, care for the intimate concerns of the profession in his counties, energize, build up, and revivify the

dormant county societies, and that too with the minimum, or no expense to the state society, and all to his own material benefit. Our state has had some fine helpful men on the Council in the past, men who have served the organization well, and we feel sure the new board will set a pace that will make it interesting for their successors to surpass in net results attained.

The Councillors are:

1st District—Dr. W. H. Ward, Plymouth.

2nd District—Dr. K. P. B. Bonner, Morehead City.

3rd District—Dr. J. W. Tankersley, Wilmington.

4th District—Dr. C. F. Strosnider, Goldsboro.

5th District—Dr. Ben Hackney, Bynum.

6th District—Dr. W. deB. MacNider, Chapel Hill.

7th District—Dr. L. A. Crowell, Lincolnton.

8th District—Dr. J. W. Ring, Elkin.

9th District—Dr. M. R. Adams, Statesville.

10th District—Dr. E. B. Glenn, Asheville.

FITTING SPECIFIC PHARMACOLOGY TO SPECIFIC FUNCTIONAL AND STRUCTURAL PATHOLOGY.

In the treatment of disease by the giving of medicine, the objective aimed at is the setting up in the patient's body of a pharmacologic action that shall exactly and completely oppose the forces of the pathologic functionings, which are at that time at work. Just in what proportion of cases this therapeutic aim is actually attained in practice, is of course, not discussed here. But as has been stated, the hoped for therapeutic consummation of scientific effort, is always in the mind of the physician as he writes the prescription.

There is, however, much more to any pharmacologic action of medicines, that finally matches and over-matches the disease processes, than is comprehended in the mere theoretical arraying of a specific pharmacologic function and structure, against a specific pathologic function and structure. The element of time, has entered into the make-up of the problem. The disease structure was not built up in a day. Nor is a single organic function gone awry, all there is to it. There is now active in the body a pathologic harmony, so to speak, where there had formerly been a physiologic harmony.

On one day a single organic function had become deranged, which derangement the next day threw another function out of balance, and so on function deranged function until the combined powers of the deranged functions were in the mastery of the body. This spells out disease. This is the complex problem at which specific pharmacology is aimed. The complexity of pathology naturally introduces the prescriber to the fact that there must be complexity in the working ing out of therapeutic results through pharmacology.

Apparently if not actually the orderliness of systematized disease, is oftentimes more persistently disease-ward, than had been the orderliness of systematized health, towards the maintenance of physiology. Physiology is no longer a dependable ally. In some way the supremacy of physiologic function was attacked, and although the force of the initial attack may have been insignificantly little, still in the environment of physiologic functionings the germ found pabulum for its growth and multiplication; and then systemic function instantly ceased to be offensively constructive, and became in part at least defensive. Physiologic function still acted and reacted biologically, but with divided force.

Pharmacology as here written about links it up with biology, And that is the thought. When the physician aims medicine at disordered or diseased function and accomplishes his object, that is practical organo-tropic pharmacology. When he aims at the destruction of the disease germ itself and is successful, that is practical etiotropic pharmacology.

In the one case the physician feels he has the force of biologic life to aid the prescribed medicine in bringing about restoration of the lost physiologic function. But in the other case, the pathologic harmony previously mentioned, is as a built up wall of protection around the germ that caused the disorder. And the physician knows that if the medicine reaches the germ at all, it must do so by following some biologic law other than the laws governing in normal systemic life.

The study of biologic law is fascinating. Physiology, pathology, and pharmacology are but three different viewpoints from which biologic law is studied. It is interesting to contemplate the fact that pharmacology can in a biologic way, reach and destroy a germ that has been

biologically protected against other attack. The germ in self-protection only reacts to present emergencies. Given the time, the germ will adjust its life functions to environment.

The pathology of chronic malaria is an example of a biologically constructed dwelling place for an invading parasite. It took time to do it. Biology has been so impartial to the interests of both the systemic life of the patient and the life of the protozoa, that functional actions and reactions have preserved both intact. With the possible question, however, as to which is the better off for having been in the biologic meet? At any rate the parasite has become the quiescent unoffending guest of its host. And the prescriber faces the fact that biology has carried so far, that the forces of the body are defending the protozoa against the action of quinine! Time in which to build up defenses against the quinine it met in the circulation has enabled the protozoa to defy quinine. The physician faces that fact, but—and here comes in in a roundabout way, the action of etiotropic pharmacology—the physician conjointly prescribes strychnine and quinine. The strychnine activates the quiescent parasite and the new life it receives from the strychnine causes it to come out from behind the biologic fortifications. Here—without time for reaction efforts and effects—the protozoa meets quinine, and is destroyed.

It follows as self-evident, that whenever medicine is responsible for recovery from disease, there is nothing more mysterious about the action of the medicine in producing the result, than are the simple pharmacologic actions of strychnine and of quinine as here pointed out.

WHAT ABOUT BLOOD PRESSURE?

It has been stated by some writers that we pay too much attention and lay too much stress upon blood pressure and thereby tend to make neurasthenics of our patients. These call it a fad, and tell us that the sooner we forget there is such a condition, the better it will be for our patients. Let us see if this be true.

In the average busy practice we all see patients who are partially or wholly paralyzed as the result of a "stroke," and such a condition is taken as a matter of fact, or as a condition that will necessarily follow after a certain age, and the case is treated as a routine condition that was expected. Should this be? We recognize that it is the result of a hypertension and arterial hardening, but what do we do to prevent this result?

When we see our friends and patients permanently crippled or dying in middle life from cerebral hemorrhage, should we not think more deeply as to how this can be prevented in the future, for the benefit of others? Are we doing our full duty otherwise? Unfortunately the large number of busy physicians are willing to accept laid down precepts of years gone by and do not give their time or efforts to see whether these principles are correct, and so the toll continues to be taken year after year, often of our best citizenship.

What is done usually when a middle aged man comes into the office to consult the physician about a full feeling in his head and occasional vertigo, sleepless nights, loss of memory, and other common symptoms? Naturally now the blood pressure is taken, and if it is found to be considerably above normal, the usual advice given is to take a little rest and cut down the diet, and forget the hypertension, "as it is only nature's effort to keep up the circulation." This is particularly true when there are no organic lesions found. These patients are wholly dependent upon the physician, and in their trustful way, do forget the high pressure, and do pretty much as they please until the inevitable happens, when again they seek the expert advice of the same physician.

Are we doing our whole duty by such advice and care? These physicians call these hypertensions "essential." What that means may be inferred from the definition of the word, but to the writer's mind it means ignorance. There is no such thing as essential hypertension. Were there such a condition normally, all persons above a certain age would necessarily have a hypertension in order to keep well, and anyone with any practice at all will at once say that this is not true, for a greater number of persons living a regular life will run a normal pressure through life and live to a good old age.

It must be recognized in time that all hypertensions are abnormal no matter what the age, and if recognized, must be cared for in order to prevent future trouble. There can be no question in the logical mind that most, if not all patients, should be warned of the element of danger in a high blood pressure, and when it does not seem best to so acquaint the patient, advice should be given that will have for its object the same end that would be had from a statement of the true condition, so that the patient may

have the benefit of care for the prevention of either a hemorrhage or a nephritis, or other condition that will usually follow.

The time comes in the course of a hypertension when it may become compensatory, but even so, this does not warrant our allowing a hypertension to continue to such a point, when we have within our reach a means for its relief and prevention. There is no excuse in this day for such neglect. Not only have we the usual and well tried dietary methods, rest, regulated exercise, and other means, but we have the well proven method of treatment by physical measures. This includes the electric cabinet baths, hydrotherapy, and the methods by the use of electrical currents. This latter, by the use of the high frequency current (the auto-condensation method), the wave current from the static machine, and vibration of the proper intervertebral interspaces, have been proven so conclusively to be of use both for prevention as well as for curative effects, that no physician has a reasonable excuse for not at least looking into their value, even if he does not apply them. It is to be hoped that the future will bring out a better understanding of this matter.

THE LAST WORD IN MEDICINE.

The discussion in the editorial columns of The Journal for March, of the law of living, under the somewhat alliterative heading, **The Science of Morality,** suggests that contemplation of the picture of the workings of that law, as the law may reasonably be supposed to project itself into the distant future, may present features of some interest to physicians.

When it was, that inherent human instincts first began to try to alleviate suffering and to repair damages to the physical body, and just when the practice became of sufficient sociologic importance so that certain people took upon themselves that exclusive service to mankind, does not matter. That the farmer and the tradesman and the teacher were the evolutionary products of the human needs and demands of the times, exactly the same way as was the physician, is plain enough. Each of such classes was and is but a forced singling out and setting apart through biologic law, by the human-body world, of certain of its members for the meeting of specific continuously recurring physical emergencies. In brief, society's biologic reaction to the inevitable ills to which the human body is heir, is the bringing forth out of the body sociologic the hygienist the sanitarian, the physician. The bringing forth of the physician is not though, an altogether one-sided performance. Biology does not work in that way.

Society only presents the human needs, and names the price it is willing to pay for efforts at amelioration of suffering, and then someone who is biologically tempered for the work, hires out to the community as its physician. And it is this matter and fact, the spirit and essence of the biologic law of compensation—it is the picture that this law presents as it follows man over into the beyond, that is discussed here as the Last Word in Medicine.

This picture can be very vividly seen in the imaginary possible conversation between the physician and a former patient as they meet on the Golden Streets.

Patient to Physician: "You so treated my body back there on earth that I was forced to come here forty years ahead of my time!"

Physician to Patient: "Well, what if I did, this is a thousand times better place than Milwaukee ever was, so what are you kicking about?"

It would seem in this instance, that the physician in his practice had been well within the bounds of biologic law, and that the patient would recognize the fact, and that thereafter their companionship would be fit for such environment. But there are other possible greetings wherein the relentless sway of biologic law, might make things more inextricably embarrassing, for the physician. For instance, assuming that motives are eternal, and that in accordance with biologic law they go along over with patient and physician into the enternal somewhere, it would be quite within the possibilities for the patient who had been there for a period of several of our earthly years, upon the physician's arrival, to call his attention to the fact that, "after he had left earth and could not defend his property, the physician had collected a padded bill from his estate!" or that, "the physician had made more visits during his last illness than was necessary!" or that "he had split fees!" Biologic law turns neither to the right nor to the left, and under such hypothetical circumstances as are cited, the biologic law of compensation is, however, absolutely impartial, and it may as readily be assumed that the physican has in his association with the patient learned as much about this patient, as the patient had learned about him, and so the law of

compensation would balance accounts. It must be—and it is comforting to so think—that there is some such last word equalizer, in the affairs of the beyond.

EDITORIAL NEWS ITEMS

Lt. Col. W. L. Dunn, Asheville, N. C., who has been with A. E. F. in Italy, has returned and resumed practice.

Major Arthur T. Pritchard, Asheville, N. C., absent with the A. E. F. more than a year past, has returned to his practice.

Maj. J. L. Haines, late commander of U. S. Army Base Hospital Unit No. 65, in the A. E. F., in France, has returned to his home and resumed practice in Winston-Salem, N. C.

Capt. J. S. McKee, Raleigh, N. C., has been honorably discharged from the U. S. Army and resumed practice at his former home at the Capital City.

Dr. O. L. Miller, of Atlanta, Ga., announces his return from the army to be associated with Dr. Michael Hoke. Practice limited to orthopedic surgery.

Dr. Percy Ahrons, beginning July 1, 1919, will assume the duties of full time health officer of Wake County under an arrangement whereby Wake County and the city of Raleigh each contribute $10,000.00 for the annual upkeep of the department. Dr. Ahrons has been for some time connected with the U. S. P. H. Service, having charge of the extra-cantonment zone during the life of Camp Polk at Raleigh, N. C., and is admirably qualified for service in his new psoition.

Dr. Baxter Haynes of Spartanburg, S. C., at a recent meeting of the South Carolina State Medical Association at Florence, S. C., was elected a member of the Board of Medical Examiners from the fourth district. Dr. Haynes is a conservative, intelligent physician and we think his election was a wise one. He was originally from North Carolina.

The public health work performed in Charlotte, N. C., during the past year under the direction of the city's skilled health officer, Dr. C. C. Hudson, has been of a very high order and has evoked most favorable comment from experts at the recent meeting of the North Carolina State Health Officers' Association.

Clarence Barker Memorial Hospital, Biltmore, N. C., receives a donation of $50,000.00 by the will of Mrs. Virginia Purdy Bacon of New York, a granddaughter of the late Commodore Cornelius Vanderbilt.

The recent meeting of the N. C. Hospital Association at Pinehurst shows the constant trend of sentiment growing toward hospital instead of home care for the sick in North Carolina. Speed the day wehn every county will feel itself, in order to maintain its reputation as the abiding place of respectable civilized people, called upon to erect and maintain a county hospital. Certainly, as a well known North Carolina doctor has often said in the past fifteen years, there is no reason why counties should evade their responsibility on this line than in the matter of construction of jails, court houses, or county homes. And no more reason for physicians shouldering the sole responsibility of maintenance of hospitals for the care of their cilentele than for the lawyers to build court houses from their own earnings, or ministers of religion erect the church edifices. How long will the average county in North Carolina fail to awake to its responsibilities and avail itself of the excellent statute under which any Carolina county may equip and maintain a county hospital?

Dr. Stuart McGuire, President of the Medical College of Virginia.—At a recent session of the trustees of the Medical College of Virginia Dr. Stuart McGuire, the well known Richmond surgeon, was elected President of the institution. Dr. McGuire has been dean of the faculty since the consolidation of the two Richmond colleges of medicine in 1913. He is the first president the college has had since the resignation of Dr. S. C. Mitchell in 1914. Dr. McGuire was the guest of honor at a dinner at the Jefferson Hotel on the evening of March 20, shortly after his return from service in the U. S. Army where he served with distinction attaining the rank of Lieutenant Colonel. Addresses were made by Dr. McGuire, and Drs. W. L. Peple, Paul V. Anderson, J. H. Smith, J. F. Geisenger, all of whom saw service with Lt. Col. McGuire's Base Hospital Unit in France. Known everywhere as one of the most lovable medical gentlemen of the South, a surgeon of rare skill, in the prime and vigor of active useful life, there is no honor that may come to Dr. Stuart McGuire that the thousands of doctors who have the pleasure, and the

honor, of his personal acquaintance will not say is justly bestowed and honors the source as well as the recipient. May this fine old Southern College with its glorious traditions, and its faculty, the equal in professional ability of any in the country, continue to be the alma mater of continuing generations of successful medical men.

In time it is not too much to expect with Richmond's constantly growing preeminence as a great clinical center, this college will logically absorb the other excellent Virginia college of medicine, and truly then the Old Dominion may well pride herself on having done her full duty by both profession and public.

The Charlotte, N. C., press and citizens generally have had a number of kindly expressions relative to the meeting of the State Medical Society in that city in 1920, and while quite a long time off, the interest already manifested will ensure both a record-breaking attendance as well as social attractions not surpassed, if equalled, by any city in the state which has previously entertained the doctors.

The Virginia State Medical Society, which failed to hold a session in 1918 on account of war conditions, is through its officers planning for a great meeting in Richmond October 22 to 26, 1919. Richmond is a most charming city to visit, the social attractions, especially to doctors attending medical meetings, numerous, and with an early start in making ready a full program, there is every reason to predict the October meeting will probably be the largest the society has ever held.

Dr. Washington Berry Grove, United States Navy, died January 21st. He was 43 years old and a graduate of the University of Virginia. He was in command of the Norfolk Hospital as chief surgeon of that institution at the time of his death.

Dr. A. Parker Hitchens.

From Indianapolis comes the announcement that Dr. A. Parker Hitchens, one of the foremost bacteriologists in the United States, has accepted an appointment as associate director of the biological division of the Lilly laboratories.

Dr. Hitchens was associated with the H. K. Mulford Company for eighteen years, and during the last ten was director of its biological laboratories. In 1918 he was commissioned a major in

the medical corps and took up his duties in Washington at the Army Medical School, devoting practically all of his time to a study of influenza. Upon discharge from active service he was commissioned Lieutenant Colonel in the Medical Reserve Corps.

Dr. Hitchens has been secretary of the Society of American Bacteriologists for a number of years and is editor of the organization's publication, "Abstract of Bacteriology."

Chloramines as Nasal Antiseptics.—Dunham and Dakin (British Medical Journal), conducted a series of experiments on normal men to determine the possibilities of the chloramines as disinfectants of the nasal cavity in carrier cases. They suggest the following plan of treatment: The nose should first be cleansed by irrigation with salt or a 0.25 per cent. aqueous chloramine-T solution, or by repeated spraying alternating with blowing of the nose. The same chloramine solution should be used as a gargle at the same time. When the increased nasal secretion has subsided after this cleansing a two per cent. solution of chloramine-T in chlorinated eucalyptol and paraffin oil should be sprayed thoroughly into all portions of the nose with an oil atomizer. At least four oil treatments should be given daily, or one every two hours if the treatment is to be intensive. The oily solution maintains a sufficient concentration of the chloramine for about two hours, but not for longer.

BOOK NOTICES

"Rational Hydrotherapy." A manual of the physiological and therapeutic effects of hydriatic procedures, and the technique of their application in the treatment of disease. By J. H. Kellogg, M. D., LL. D., F. A. C. S. Fellow of the Royal Society of Medicine; the Societe d'Hygiene of France; the American Society of Microscopists; the American Medical Association; the British and American Associations for the Advancement of Science; Medical Director of the Battle Creek (Mich.) Sanatorium; Author of "The Art of Massage," etc., etc. With three hundred and two illustrations, one hundred and seven plates, nineteen in colors. Sixteenth Thousand. Battle Creek, Mich., Modern Medicine Publishing Co.

This is one of Dr. Kellogg's best books. It contains 1247 pages with a great many very fine illustrations.

For years excellent scientific treatises on hydrotherapy have existed in the French and German languages, but for nearly half a century not a single systematic English work on the hydriatic treatment of disease has appeared with the exception of the translation of the article by Winternitz in Ziemssen's System of Therapeutics, and a recent excellent work by Baruch.

The author's purpose in the preparation of this work has been to present in a more systematic and comprehensive way than has heretofore been undertaken, the "rational" hydrotherapy which has been built up within the last century chiefly through the efforts of Currie, Fleury, and Winternitz, whose great labors have been supplemented by others too numerous for other mention than that made in the various footnotes and references which will be found in the body of this work. It has also been a part of the author's purpose to record some of the fruits of his own experience within the last twenty-five years, during which time, as superintendent of a large medical establishment, he has had opportunity to make a careful study of hydriatic principles and methods.

The general order of the book is as follows: First, a short historical sketch and a brief resume of the physical, anatomical, and physiological facts which are especially related to the subject; second, a study of the physiological effects of thermic applications; third, a description of the technique of all useful hydriatic procedures; and, fourth, a section on hydriatic prescription making, in which is presented a brief summary of the indications presented by the diseases most commonly encountered in practice and of the hydric measures required to meet the same. The author hopes to publish later another volume in which the rational hydriatic treatment of individual diseases will be more fully discussed.

The number of procedures described in the work is about two hundred. Many more might have been mentioned, but the writer's design has been to describe only typical hydriatic processes, each possessed of a definite and characteristic therapeutic value. Of those procedures which are the outgrowth of his own experience, the author has mentioned only such as have acquired a recognized value by extended use. Of these the most worthy of mention are the electric-light bath, the percussion douche cold mitten friction, cold towel rub, a number of forms of hot and cold compresses and packs, and the simultaneous hot-and cold douche.

The writer has used for the foundation of this work a series of lectures which he delivered before a class of medical students in the summer of 1890. Similar courses have been given almost yearly since, to classes of increasing number, and there has been a growing demand for a text-book embodying the essentials of the subject-matter presented, and adapted for use by the medical students and nurses, as well as practitioners who desire to obtain a knowledge of the foundation facts and principles of rational hydrotherapy.

Transactions of the Twenty-Fourth Annual Meeting of the American Laryngological, Rhinological and Otological Society, Inc., held in Atlantic City, N. J., May 29th and 30th, 1918. New York: Published by the Society, 1918.

This is a very fine volume of 436 pages. It contains several illustrations and the articles appearing in it are very fine.

"The Nurse's Service Digest." A manual of nursing, by Laurence Humphry, M. A., M. D., M. R. C. P., M. R. C. S., physician, and formerly lecturer to probationers, at Addenbrooke's Hospital, Cambridge, England; Teacher of pathology and examiner in medicine, University of Cambridge. Second American Edition revised and enlarged by W. Myron Reynolds, M. D., from thirty years of research in hospital, clinic and active practice in New York City. Il-

lustrated, 1919. George Sully & Company, New York.

The book is based upon lectures given by the author to the probationers at the Addenbrooke's Hospital during the last two years. The plan adopted is to give a short account of the anatomy of each set of organs, and immediately afterwards to treat of the diseases of those organs and the appropriate nursing. A description of baths, enemata, poultices, bandaging, and various nursing appliances will be found in the final chapters. An appendix contains receipts of food suitable for invalids.

The symptoms and management of common diseases and the complications likewise to occur are described in order to assist the nurse in following the course of the malady the treatment of which is assumed to be in the hands of a medical attendant.

It occurs to the reviewer that the book is a very valuable one for the pupil who is beginning the study of nursing and it would not be a miss for training schools to have every one of their students to at least read the book.

"The Unsound Mind and the Law." A representation of Forensic Psychiatry, by George W. Jacoby, M. D., author of "Child Training as an Exact Science." Fellow of the New York Academy of Medicine, Member of the American Medical Association, American Neurological Association, and New York Neurological Society, Consulting Neurologist to the Hospital for Nervous Diseases, the German Hospital, the Beth Israel Hospital, the Red Cross Hospital, and the Infirmary for Women and Children in the City of New York, etc. Price $3.00. Funk & Wagnalls Co., New York, London.

A careful consideration by an expert of the various types of mental abnormality with a discussion as to the degrees of responsibility that may be assigned to persons classified under different categories.

The first part of the book deals with the general relation that jurisprudence bears to the treatment and restraint of those suffering from mental disorders, the second treats of methods of diagnosis and discrimination between different types of mental disease, and the third and fourth parts cover hypnosis, sexual anomalies, and the manner in which opinions should be rendered.

We have looked over this volume with unusual interest. It is a valuable book of 424 pages. It makes good reading for the laity and certainly for the medical profession. Medical men who are interested in this special line of thought can not afford to be without this book. It has been written by an expert, a man who is familiar with the subject treated.

"The Wine of Astonishment." By Mary Hastings Bradley, Author of "The Palace of Darkened Windows," "The Favor of Kings," etc. Price $1.50. D. Appleton & Co., New York, London.

Must a girl have a dowry to marry the man of her choice? Evelyn Day's mother thinks so in the Wine of Astonishment so she breaks off her daughter's engagement to Jim Clarke, a young lawyer with his own way to make, and arranges her marriage to Christopher Stanley, who has inherited money.

But youth is rebellious, and at the last moment Evelyn refuses, and then Stanley convinces her of Jim's unfaithfulness, telling how Jim had been seen at a low dance hall with a girl of the streets. This was a boy's innocent adventure of curiosity but Evelyn believes it recent and consents to a marriage with Stanley that shall be an arrangement of friendship—until she is ready for love—and then the plot begins to unfold.

A boy in Chicago, of conservative New England stock, fretting at his tame environment—going secretly out to "see the city" for excitement and being nearly ensnared in its quick-sands—that is the opening of The Wine of Astonishment, a swift-moving story of marital life in the present day which endeavors to show how the war has solved civilization's problems and love again triumphant.

"Submarine and Anti-Submarine." By Sir Henry Newbolt, Author of "Tales of the Great War," "The Book of the Thin Red Line," "The Book of the Blue Sea," etc. With Colored Frontispiece and 20 other illustrations by Norman Wilkinson, R. I. Crown 8vo. Price $2.25 net.

This book contains a collection of tales of the submarine campaign, based on authentic narratives hitherto unpublished. It also traces the evolution of the undersea boat from its earliest days, demolishing the German claim that it is the product of German ingenuity and skill Among other introductory chapters is one on the submarine war as an illustration of the contrast between the national spirit of England and that of Germany.

The 27 illustrations are certainly very

beautiful and adds a great deal to the value of the book. Possibly the volume is equal if not superior to any that has been published up to this time descriptive of the important part that the submarine and the anti-submarine played in the war.

"The Action of Mscles" including muscle rest and muscle re-education, by William Colin Mackenzie, M. D., F. R. C. S., member of the Council of the Anatomical Society of Great Britain and Ireland and of the Staff of the Military Orthopaedic Hospital, Sheperd's Bush, London; formerly Lecturer on Applied Anatomy to the University of Melbourne, and Examiner in Senior Anatomy to the Universities of Melbourne and Adelaide, with 99 illustrations. Paul B. Hoeber, 67 and 69th St., New York.

In army medical circles the view is held that of the wounded men returning from the French battlefields in the Great War, some 65 per cent, are suffering from disabilities of an orthopaedic nature; in other words, whether the injury be one of muscle, bone, joint, never, or central nervous system, it is of a character in which the question of muscular function becomes of prime importance for purposes of treatment. When we consider that muscular tissue alone constitutes the largest part of most animals, it is surely time that more attention was paid to the teaching of myology than has been allowed heretofore. Function of muscle—the all-important factor—cannot be satisfactorily taught in the dissecting room. It can only be taught on the living, and is largely a question of comparison—a comparison between the normal and the paralytic. Only on this plan can the question of origin and insertion of a muscle have more than an academic, or rather examination interest for the student.

Just as important as a knowledge of the action of a muscle is a knowledge of the action of its opponent, and the opponent should be specifically mentioned. Such a statement that fifteen external rotators of the hip, including such powerful engines as the psoas and great gluteus, are balanced by one muscle and part of another, can no longer be tolerated. The fact that the student when learning the action of a muscle learns that of the opponent wil have an important influence on his treatment, for example, of muscular weakness, or paralysis, or joint injuries. Thus in a case of weakness of the deltoid he will associate with that muscle the opposing adductor, namely, the pectoralis major. He will recognize that there can be no recovery if the opposing pectoral be allowed to contract, and will immediately guard against this occurrence.

As the muscles of the human body are adaptive or survival results of struggles which have gone on during the past ages, it follows that some appreciation of their compatative anatomy is essential for the clinician. It is inconceivable that any one should attempt to handle a paralyzed deltoid or quadriceps without some knowledge of its ancestral history, or of the entities of which its function is composed.

There never has been a time in medical history in which this subject looms up with as much importance as now. Consequently, we think the appearance of this book is quite timely and it is bound to be appreciated by thousands of physicians who will come in contact with cases who will be suffering with many varieties of muscle inaction coming on as result of injury or disease brought about by the war.

The illustrations are good and illustrates well the text. We do not hesitate to recommend the book.

There are probably few physicians in active practice who are not more or less familiar with, at least, the name of Fellows' Syrup of Hypophosphites. This valuable product has been prescribed by the medical profession for years. Its actual clinical value has been demonstrated too often and in too many hands to admit of any doubt or question.

It is worthy of note, however, that much stress is being laid upon the value of those mineral constituents of food to which the name has been given of "Chemical Foods," such as calcium, potassium, iron, and manganese which are all actually needed by the body quite as much as proteins or carbohydrates are. When deprived of a sufficiency of such "Chemical Foods," metabolism suffers. Therefore, to supply such "Chemical Foods" is a logical therapeutic measure, and to supply them in the form of Fellows' Syrup of Hypophosphites is not only logical but valuable because, in addition, the dynamic and cell activating properties of quinine and strychnine are also secured.

"Chemical Foods" and their uses have been briefly described in an interesting booklet issued by the Fellows Medical Manufacturing Co., Inc., New York; and copy of this booklet, together with samples of Fellows' Syrup, will be sent to any physician on request.

Miscellaneous.

Gunshot Injuries of the Elbow-Joint; Treatment by Early Excision—Shepherd, in The British Medical Journal, says that injuries inflicted in the region of the elbow-joint of necessity vary with the nature of the missile, the degree of sepsis, and the amount of damage to bone and soft parts. The ultimate results of injuries to the elbow-joint by gunshot cannot be regarded as satisfactory, as in the majority of cases there is complete ankylosis. Even if the wound remains aseptic, bony out-growth will in the long run inhibit movement to a considerable degree.

When the bones entering into the formation of the elbow-joint are badly comminuted, sepsis spreads in the surrounding parts and the patient shows signs of septic absorption. Whatever method of combating infection is undertaken, the results are the same, affording risk to both life and limb.

Primary excision of the elbow for tuberculous disease, fracture, dislocation, etc., yields good results and it would appear feasible that equally good results might be obtained by early excision of wounded joints. The degree of sepsis in the surrounding tissues forms no contra-indication to immediate excision. The amount of bone to be removed depends upon the nature of the primary injury.

In an early series in which the humerus was removed just above the epicondyle with the whole head of the radius and ulna, movement was long in returning. In a later series the lower end of the humerus was removed above the epicondyles and rounded well off, preserving the radius and ulna intact and not interfering with the attachment of the triceps to the ulna through the angled incision of Kocher.

If the amount of sepsis was great the wound was left open and treated with eusol gauze or the Carrel-Dakin method, the arm splinted at right angles until sepsis subsided. In milder cases the wound was partially closed.

The splint is left off as soon as the wound has healed and motion is encouraged.

The results, even in septic cases, were surprising, the patient being out of bed early and movement encouraged by the end of the fifteenth to the eighteenth day. The author states that the earlier the excision is performed, the more certain is the patient to have a good and serviceable arm with free movement.

THE HEARTPHONE.

A Newly Perfected Electric Stethoscope.

The introduction of an electrical stethoscope, newly devised and thoroughly tested gives to the medical profession an opportunity to investigate more minutely those psychological and clinical conditions which require auscultation.

The principles of the Heartphone are similar to those of the telephone. As electricity transmits sound waves about 20,000 times faster than air, it follows that there is no over-lapping of sound waves, and the effect upon the ears is more distinct.

While several attempts have been made to produce an electrical stethoscope for practical use and some have approached the ideal, none has succeeded to the degree that has been reached by the Heartphone. It is a simple, practical instrument of marked efficiency and it is small enough to be carried in the pocket.

Briefly, the component parts are the transmitter, the receiver, the battery and a regulating controller. The transmitter is so constructed that a small, medium or large surface may be examined. The sound regulator enables the physician to adjust the tone to suit the individual and enables the examiner to cut out the loud sounds, if only the minor ones are under study.

For practitioners with defective hearing, the Heartphone will be found of especial interest as sound conveyed electrically is clearer and more penetrating. Sounds that cannot be heard by means of the mechanical stethoscope may be heard distinctly by the use of the Heartphone.

One prominent physician who has tested out the Heartphone reports as follows: "Realizing after much testing, the value of the newly perfected electric stethoscope, the Heartphone and its superiority over the old type, I wish to express my confidence in it to the medical profession. In my experienec with it, I find that it will do all and more than the air conduction instrument will do and with greater reliance."

The Heartphone is manufactured by the Globe Ear-Phone Company of Reading, Mass., U. S. A. This company is thoroughly experienced in the manufacture of finely adjusted electrical instruments, as they have for years been leaders in the production of electrical sounding devices, ear-phones, dictagraph and telephonic instruments. They pronounce the Heartphone right and efficient and an invaluable instrument to every physician.

The Successful Treatment of Influenza.

The remarkable success that has attended the systematic use of Burnham's Soluble Iodine in the treatment of influenza during the current epidemic, has emphasized again the value of this remedy in the treatment of the acute infectious diseases generally.

The results that have been obtained in influenza have been uniformly satisfactory, and used sufficiently early and in proper dosage, it has served not only to reduce the severity of countless cases, but also to limit their duration. The development of complications has been lessened to a marked degree and recovery without any unpleasant sequelae has rarely failed to follow in a few days.

In fact, in the hands of a great many physicians, Burnham's Soluble Iodine has seemed to possess almost specific properties in this epidemic type of influenza. The custom of many practitioners which has been most uniformly successful, has been to start at once with large doses on the principle that we have a mixed infection to contend with, and that it is of the utmost importance to increase phagocytosis and raise the resistance as quickly as possible.

When temperature is 101 to 104 or higher, not less than 30 drops should be given either internally or hypodermatically every three hours until temperature recedes. When given hypodermatically, it should be injected very deep in the gluteal muscles, 25 per cent. dilution in sterile water, or full strength if necessary. The temperature usually subsides after the second or third dose, then the dose can be diminished to 15 or 20 minims by the mouth every three or four hours. Many virulent cases complicated with pneumonia have been saved by this treatment.

Free Iodine will not break down healthy tissue whether given by the mouth or injected. Burnham's Soluble Iodine combats the anti-ferments, stimulates cell and glandular activity and oxidizes toxins.

Write for further information, if desired, to Burnham Soluble Iodine Co., Auburndale, Mass.

The Vibrating Sensation in the Differential Diagnosis of Affections of the Spinal Cord and Peripheral Nerves.— Williamson, in The London Lancet, calls attention to the value of the vibrating sensation in the differential diagnosis of affections of the spinal cord and peripheral nerves from hysteria, functional diseases and malingering.

He tests the vibrating sensation by a large vibrating tuning-fork, the foot of which is placed on a subcutaneous bony surface, such as the malleoli, the inner surface of the tibia in the leg, the anterior superior iliac spine, the styloid process of the ulna at the wrist, the sternum, etc.

Loss of vibrating sensation is often one of the earliest signs of sensory affection in lesions of the spinal cord. It is often lost before other forms of sensation are affected.

In the differential diagnosis of organic paraplegia from hysteria, functional disease, and malingering, he calls attention to the following point. In any case of paralysis or paresis of the legs, if the vibrating sensation is lost, while other forms of sensation are recognized, and the patient persists in this statement in spite of suggestions to the contrary, malingering or hysteria is very improbable. In malingering or hysteria, if sensation is affected, the vibrating sensation and other forms of sensation will usually be lost together.

Vibrating sensation has been lost in cases of spinal disease which have come under the author's observation that were probably due to combined pos erolateral degeneration and lost at a very early stage before other forms of sensation had been lost. He quotes the case of a man called for military service in 1917. The patient stated that he considered himself unfitted for military service because of a weakness or heaviness in his legs and slight unsteadiness in walking could have been attributed to neurasthenia or malingering but for two signs. The knee-jerks were normal; no ankle clonus could be obtained; and the only definite sign of organic disease was the loss of the vibrating sensation on the legs and the change in the plantar reflex. Six months later he showed well-marked signs of organic disease.

Williamson calls attention to the value of testing the vibrating sensation in the numerous cases of lesions of the cord and peripheral nerves now coming under observation in military practice.

While a quarter of a century has brought no new remedy for influenza, since synthetics and quinine are not to be depended on, the best results are still obtained from the salicylates which become anti-microbic in the blood. Hence, Tongaline is particularly indicated for influenza, because, in addition to the action of the salicylates, it exerts pronounced alterative and eliminative effects,

whereby the poisons in the system are promptly and thoroughly expelled.

The Neglected Therapy of Convalescence.

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstitutent and supportivve measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

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removed and other complications dealt with. The cannula is then inserted through the third or fourth interspace about, or external to, the mammary line. The original incision is then closed around a tube long enough to reach into a bottle of antiseptic fluid and the cavity is then irrigated every two hours with Carrel-Dakin solution. The infection is quickly controlled, the lung expands well, and the general condition improves rapidly.

Certainly at present the treatment of badly infected haemothorax does not give good results. Many cases discharge for a long period and only heal after much falling in of the chest wall or after wide resection of the ribs. If the lung does not expand, the author does not hesitate to reopen the wound, free the adherent lung and close the chest.

Plans are being made by Armour and Comany for the renewal of the medical examinations of 12,000 men and women working in the Chicago plant of the company. This means of safeguarding the health and safety of the Armour workers is not new but was dicontinued during the war because of the urgency of orders placed to kee pthe fighting forces supplied with food and the enormous amount of extra labor needed.

Dr. Volney S. Cheney, chief surgeon, and his corps of assistants will have charge of the huge task. Every worker in the plant will be examined free of charge. The value of visiting a doctor at least once a year for a medical examination to discover any defects in health which may be easily corrected by treatment is recognized generally by persons of means who visit their doctors regularly so that they may know in just what state of health they are. Armour and Company through their welfare bureau and their staff of doctors offer this service free to their many workers, and in case defects which have interfered with a man's work are brought to light, the man or woman will be transferred to some other task in the plant which, in the opinion of the medical men, they are better able to perform.

Splenic Extract After Splenectomy.— Shirlaw, in The London Practitioner, reports a case of splenectomy in a woman aged 45, who though she left the operating room in a desperate condition, was apparently convalescent in ten days. Then she began to go downhill, and by the 18th day, her condition was again critical, with weakness, emaciation, thirst, drowsiness, etc.

The administration of extract of sheep's spleen and raw bone-marrow daily restored her gradually to convalescence, and ultimately to complete recovery.

He reports another case of carcinoma of the duodenum in an old lady of 70, which has been solely treated with 5-grain capsules of splenic extract with a successful result. The writer cannot prove absolutely that it was carcinoma, but it was easily palpable, and he was confident enough about the diagnosis. She steadily improved under the splenic extract, has put on flesh, and last summer walked a distance of five iles to a daughter's home and back. The only drug she took was

morphin in the form of pills, at the beginning of the trouble. All other medicine made her sick.

The doctor should always have an hemostatic in his case. There is liable to be need for it any minute.

Thromboplastin Solution (Armour) is a specific hemostatic and acts promtply.

Thromboplastin (Armour) is made from the fresh brain of kosher killed cattle. There is a certain amount of that blood clotting thing in an animal's brain and this is not used up when the animal's throat is cut. It is used up when an animal is killed with a hammer. In the Armour Laboratory kosher killed cattle brain is used in making Thromboplastin. That's why Thromboplastin Solution (Armour) works promptly.

The Policy of the Ostrich.—Adami, in The British Medical Journal, draws attention to the ravages of venereal disease in the British army both before and particularly during the war, and to the policy of the ostrich, as he aptly describes it, with which conditions have been met. Describing conditions as they existed in England in 1914, Adami refers particularly to those at Salisbury Plain upon the arrival of the first Canadian Contingent in the autumn of that year. He commends the work of the National Council for Combating Venereal Diseases though he deplores their tardiness in taking definite action, so heavily did the dead hand of Mrs. Grundy press upon them." Adami makes an earnest plea for frankness and open speaking. Had the medical profession in the first place, the National Council, and the Government spoken out at the beginning of the war, conditions would have been very different today. Even Now much might be accomplished were the National Council to influence the Government to publish a statement regarding the venereal disease situation in the army in successive years of the war in the different regions, and also obtain powers to make an investigation into the frequency of syphilis or venereal disease in general in selected areas or classes of the population. Let the situation be known and faced. America did not hesitate to speak out, even before the war. In 1912, the Surgeon-General at Washington published regulations directing all soldiers returning to camp to state whether they had exposed themselves to the possibility of venereal disease and detailing early preventive treatment. General Pershing, moreover, made it one of his army regulations that the venereal status of a unit should be taken into account in determining the promotion of the officer commanding. In the overseas forces of Canada all the methods instituted in the American army, with exception of court martial, are now employed, namely, education, warning, recreation, diversion, protection, isolation, prophylaxis, and penalties. A trained N. C. O. is in attendance night and day in every Canadian orderly room in England to see that the soldier carries out instructions so as to protect himself, and these instructions are clearly set forth on the walls of the room. In London there are two early treatment centers—at Southampton Street and at Victoria—and if not in the neighborhood of these centers, the men are instructed to go to an Australian or a New Zealand center. The Dominions are working together on this matter and are appointing centers throughout the United Kingdom, which are open to men from any of the British Imperial Forces. In this work the fact that absolute immunity cannot be assured, even though preventive measures are taken, is emphasized. Otherwise, the methods adopted might lead to an increase in the spread of disease, as has actually happened in Germany. The penalty exacted in the case of the Canadian soldier is the suppression of half pay during the entire period that he is on the sick list. The venereal record is also inserted in his medical history and accompanies him throughout his military career. Adami points out that, contrary to the generally accepted view, experience at the special hospital at Witley camp has shown that physical training materially shortens the period of hospitalization in acute gonorrhea. As a result of the campaign against venereal disease, its incidence among Canadians in Great Britain has been reduced from 960 cases among 42,000 men in 1916 to 750 among 110,000 men in 1918, or more than 66 per cent. As to the effect of the return of the soldiers upon the venereal incidence throughout the country, Adami draws attention to the fact that it is not the civil population that has to fear the soldier, but the soldier the civilian. A Wassermann test is made in the case of every returning soldier whose medical sheets show a record of venereal disease and the figures for the month of August show that only 2 per cent. of the total number of men reacted, whereas in the civilian population the average number of reactions is from 8 to 12 per cent. During the four years of war nothing has been done to

meet the emergency. The provision of early treatment centers throughout the country is an impossibility, at any rate before demobilization has become a matter of history. In the author's opinion, therefore, the only way of preventing a tremendous increase in the number of cases of venereal disease throughout the country lies in providing the soldier, before demobilization, with the means of prophylactic treatment, with information as to how to obtain the same without difficulty, and by giving him precise instructions as to the method of employment.

Some Lessons Taught by the War.

Much knowledge has been gained during the war with regard to the treatment of wounds, and especially as to their prophylactic treatment. It has been shown that free and thorough drainage of septic wounds must be done and that irrigation with a suitable inhibiting agent as continuous as possible is a preventive measure of the first importance. In the case of wounds in which the anerobic bacteria predominate and which if not checked may develop into tetanus, such irrigation should be performed promptly. According to Dr. A. R. Fullerton, a well known English surgeon writing in the Lancet, March 6th, 1915, the most effective way of inhibiting the growth of anerobic bacteria is by means of oxygenation, and the readiest and most satisfactory method of doing this is by frequent irrigations with peroxide of hydrogen solutions. Fullerton further points out that this treatment is practicable in civil practice. Thus a fact long known to surgeons and general practitioners has been emphasized by war time experiences, the germicidal efficacy of nascent oxygen. The most convenient and thorough mode of evolving nascent oxygen, is to irrigate wounds with Dioxogen, because Dioxogen is the purest and most stable solution of peroxide of hydrogen procurable. Irrigation with Dioxogen by liberating oxygen inhibits the growth of germs, and is therefore to be recommended as a safe and dependable procedure in the treatment of wounds. And as Fullerton has well said, this method of treatment is as practicable in civil as in war practice, as witness the every day experiences of the thousands of American physicians who use Dioxogen in preference to any other antiseptic solution.

German Health Resorts.—The thermal and climatic stations of Germany and Austria before the war enjoyed an income of about 900,000,000 francs, while those of France received not much more than one-fourth of this huge sum. After the war the foreigner will visit France in preference to the Teutonic countries as a matter of sentiment and the French health resorts will have an unprecedented boom. The French statesmen look forward to this source of revenue as one of the principal ways of rehabilitating their country's prosperity.—La Presse Medicale.

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A CONSIDERATION OF THE ESSENTIAL SUBSTANCES IN FOOD.

By Edward J. Wood, Lt. Commander, M. C., U. S. N. R. F., Wilmington, N. C.

Until recently we felt that if we were giving to the individual the requisite number of calories estimated on the individual's weight, and that if the proportions of carbohydrate, protein, and fat were fairly well balanced our duty was well done and even in a scientific manner.

It was not until Eijkman in 1897 made the first suggestion of a more obscure fault that the attention of students of nutrition was directed to the "essential substances." Eijkman's observations were made on berbiberi which, as is well known, is a deficiency disease brought about by eating polished rice or, in other words and more accurately, rice deprived of the germ.

In 1911 Casimir Funk brought forth the vitamin hypothesis which at once attracted attention and which served splendidly as a theoretical basis for many of the deficiency problems which were then being studied. Funk regarded the solution of the etiology of beriberi, pellagra, scurvy, and rickets to be found in an essential substance specific in each disease.

Recently the brilliant work of E. V. McCollum and his co-workers has shed much light on the subject and has resulted in the complete revisal of most of our ideas of nutrition. While there have been many who do not accept all his views still his work is epoch making and his teachings should be in the hands of every physician.

McCollum objected to the term vitamin because it was chemically speaking misleading and inaccurate. He and his coworkers found two essential substances which they have called Fat-soluble A and Water-soluble B. Fat-soluble A is found chiefly in butter fat, egg yolk, and in the leaf of the vegetables as spinach, cabbage, collards, and turnips. This substance is very essential and without it the result in the extreme degree would be a disease little known in man except in Japan but experimentally in the lower animals well known, which is called xerophthalmia. I use the term "in the extreme degree" advisedly for there are many nutritional disturbances which are due to a lack which falls far short of being sufficient to produce xerophthalmia. These conditions will be referred to later.

Water-soluble B is found in many foods. Its chief source is the germ of cereal grains. It is rice deprived of germ which is responsible for beriberi. This disease represents the extreme lack of the essential substance. It remains to be seen if there are not states of nutrition which fall short of being beriberi and yet present definite disease pictures and which can be readily attributed to a partial deficiency in this Water-soluble B. In recent years we have learned that deficiency in other grains will produce beriberi when that deficiency is not made up by a mixed diet increasing the sources of Water-soluble B. This was illustrated in an outbreak of beriberi in New Foundland. The cause of the trouble was beautiful patent flour. In the beautifying process all the germ was milled out because it is this portion of the grain which causes the dinginess in the finished product and this is objectionable to our modern refined tastes. I have seen beriberi in North Carolina caused in much the same way though the deficient grain was probably corn. Owing to the fact that the germ of corn deteriorates very soon because of its high fat content and as the rancid product causes great financial loss the method of "degenerating" was introduced into commercial milling. The germ removed with the bran is sold separately and has a great name among dairymen as a milk maker. The part, therefore, which man most needs for protection against disease as well as for growth and development is discarded and goes to the cattle. It has been shown that phosphoric acid (P_2O_5) is a very reliable indicator of this essential substance and it was so used in the beriberi work in the Philippines. In my corn work Captain George F. Catlett found for me that the commercial corn meal was very low in this indicator and that the amount increased according to the degree of milling while the germ itself contained about six times the amount of the product which we are in the habit of eating at our tables daily. We also used sulphur as an indicator but as the results were found to be parallel it was abandoned and we depended on

the phosphorus pentoxide. It should be clearly stated that this phosphorus compound does not contain any virtue as an essential substance but that its presence indicates the richness in the essential because the two come from the same portion of the grain.

Using highly milled corn we were able to produce polyneuritis gallinarum at will. It might be well to remind you that this condition in fowl is the analogue of beriberi in man and for this reason the fowl is used for extensive experimentation along this line. Our work was done chiefly with pigeons. It was found that while deficient corn meal would produce the disease that the animal could be cured in a few hours by the administration of an alcoholic extract of the corn germ even though the paralysis was so complete that the extract had to be given with a tube and massaged out of the paralyzed crop. The result was amazing in its completeness and rapidity. This was only a duplication of the experimental work done with polished rice and rice polish but it showed the universality of the law. One of our most interesting observations was that young pigeons became neuritis in much less time than the mature bird. We found, too, that a gradual withdrawal of the essential substance was better borne than the sudden withdrawal. A bird given a diet which was only partially deficient manifested symptoms which were not polyneuritic and this decrease could be carried to a considerable extent if done gradually without producing polyneuritis. This may have a bearing on the susceptibility of the young to deficiency conditions.

One of the most vital things in a study of this type of deficiency is the part played by the presence of strong alkalies in the cooking of cereal foods. It had already been found in the Philippines that cooking soda rendered it more deficient. We cooked corn meal with bicarbonate of soda and produced polyneuritis much sooner than when it was left out. The bicarbonate is decomposed into sodium carbonate—a very harmful substance in food—and carbon dioxide. This latter is the thing which produces rising in the biscuits of this section. In many instances a certain amount of sour milk is added to offset the injuriousness of the alkali but the amount is purely guess work and is never calculated on the varying degree of sourness of the milk. Again, in the use of baking powder we see the same crude effort to neutralize the alkali by the addition of acid sodium phosphate, but it would appear essential to make an assay of each batch of soda and acid phosphate to determine the amount needed to balance. Of course, this cannot be done commercially. While the commercial product is much more accurate than the crude home neutralization still there must remain many chances for error. It remains to be proven whether or not a slight degree of alkalinity is enough to produce any serious change in the Water-soluble B. Until we know more regarding this danger it is far better to advise our people to use yeast in raising bread; never to use bicarbonate of soda in cooking at all; to learn the method of making Maryland biscuit or, as we say at home, beaten biscuit. We can well afford to go back to the old hoe cake and corn pone which our great grandparents baked in the ashes and in which no rising agent was used. If to this is added the resumption of home ground corn and wheat in which type of milling the grains are not deprived of any vital element I believe the end of many modern ills is in clear sight.

My own observation leads me to the conclusion that pellagra is much more apt to be a deficiency of this Water-soluble B than a general deficiency brought about by an unbalanced diet. I have seen pellagra entirely disappear in a few days on a diet of corn germ and I believe that highly milled corn and wheat with alkaline rising agents added will produce the disease promptly. The deficiency in this case is not so complete as that necessary to produce beriberi but if the diet was solely these articles without any offset in other things, or, in other words, if the deficiency in Water-soluble B was complete the disease would be beriberi and not pellagra. I appreciate that many will take exception to this view and that one of the chief arguments will be that an individual drinking enough milk (the source of supply of Fat-soluble A) will never develop pellagra. I can only answer by saying that I have cured a chicken suffering the most extreme degree of polyneuritis gallinarum by administering milk and that the response was as prompt as when the extract of the grain germ was given. It would appear then by this that one type of deficiency may be prevented or cured by supplying the other essentials. Whether this is true or whether I have read my results incorrectly remains to be seen but at this time I am disposed to think that an abundant supply

of fresh milk will prevent both pellagra and beriberi.

Above I said that the sources of Fat-soluble A were milk, the yolk of eggs, and the leaf of vegetables. While the extreme degree of a lack of these sources may be partially made up by a few other sources as the glandular organs of the beef or sheep still these three sources must be regarded as the most important. When there is no Fat-soluble A in the diet the extreme penalty is the condition known as xerophthalma. I believe that there are many nutritional states which represent all grades of this fault. There are many proofs of the harmfulness of a lack of this essential. I found in my own guinea pigs failure to develop, lack of proper tone, abortions, failure to propagate, and early succumbing to any trivial disorder. The diet was carefully planned and consisted of cereal grains and fresh vegetables to which were added raw potato and carrots. When hay was added the improvement was remarkable. The succulent green vegetables leaves contained too much water with a consequent lack of concentration of the elements necessitating a larger amount of the food to secure the needed amount of Fat-soluble A than the digestive apparatus could accommodate. Ducks fed on grain and meat did badly until dry alfalfa leaf was added after which they produced a remarkable number of fertile eggs.

In many sections our people are not drinking milk or eating butter. I made this same statement here last year and was taken to task by a number of my friends who disagreed. It may be that it is not a general rule but usually it can be said that free range, ticks, and deficiency diseases go hand in hand. I am convinced that the people who do not consume milk are suffering the greatest economic handicap and that the greatest thing life insurance companies can do to lower their rates in eastern North Carolina is to undertake a campaign of milk education. I find hundreds of people each year who say milk and cream is a poison to them or that they simply cannot get it for any price. These people have then only two other sources of Fat-soluble A to depend upon: the leaf of vegetables and eggs. From experience I think I can safely say they will not eat enough eggs to meet the need. Then we have left only the despised collards and other greens. It was a great shock to me to learn this fact. I had always regarded this class of food as a pure waste of space in the stomach of half fed people. A primitive instinct seems to have taught these people the importance of the leaf vegetables and we doctors must change our opinion of this source of food.

Again, we must consider the harmfulness of the use of bicarbonate of soda in cooking for it is a common practice especially among the mill population (Voegtlin) to do this in order to insure more rapid cooking and a tenderer food. I believe that it is as injurious as is the same practice on the cereal foods.

There are many points of chemical importance in cookery which must be made plain before this food problem can be solved. I have only mentioned one. Another possible one is suggested by the observation of Hess who found that orange juice boiled with water did not lose any antiscorbutic property but that orange juice boiled with oil lost all antiscorbutic virtue. Can this same thing be applied to the cooking of many classes of food in grease? Surely the use of fat in cooking among the poorer classes must be a source of some danger which is yet to be demonstrated.

In recent years I have been deeply impressed with the ever increasing number of neurasthenics and psychasthenics from the country who consult me. Their symptoms are legion and the organic basis is absent except local infections to be found in badly neglected teeth and gums. Being interested in pellagra and because these people present in many instances so many of the mental and nervous symptoms common to that disease I have been studying their diets. It is rare indeed among this class to find those who are eating the proper food. As a rule there is a very definite lack of Fat-soluble A and not infrequently Water-soluble B also. On more than one occasion I have wondered if the mouth condition did not really begin as a low grade scurvy which added to general neglect resulted in severe mouth infection and thereby a vicious circle was instituted. There is certainly a deficiency condition among these people which can be more helped by food than all the proprietary remedies which our profession find so easy to dispense and thereby save serious investigation of the cause. There is no more fertile field for valiant uplift work on earth than this one study and already we know enough to give us texts to last several years if we will but use our opportunity. We feed our cattle more or less scientifically and we would feed our children likewise if

they were slaves and the output of work was greatly influenced by it but we feed our children how? No effort of the physician today spent in investigating the diet of his neurotic patient will be wasted. It is in reality a never ending field for delightful surprises. More can be accomplished by one hour of patient investigation of not what is on the patient's table but what the patient actually ate than by all the high frequency apparatus sold during the past decade. Can it not be said that the backbone of Weir Mitchell's rest cure for neurasthenia was diet? And what did he give his patients? Certainly he gave them an abundant supply of Fa-soluble A and there no lack of Water-soluble B though the distinguished neurologist never heard these names and probably never thought there was any very definite reason for their use except that these foods proved to be good fatteners.

There are hundreds of people in North Carolina today waiting for us to go home and cure them of these neurotic horrors. If we meet the problem squarely by declaring at the start that this group of maladies can only be cured by the proper food and the aid of a good dentist the fight is already half won. In spite of primitive instincts people like animals will not naturally select the right food if directed by natural desire alone. This is true of the sanest people but added to this are many vicarious eaters: biscuit eaters, bread and meat eaters, so-called "vegetarians" not to mention the various fad eaters with whom we all are familiar.

Surely we can soon say "Tell me what he eats and I will tell you what manner of man he is."

Unilateral Gynecomasty after Injury to the Testicle.—Apert and Declety relate the following curiosity of medicine: A soldier, aged 25, was wounded in the scrotum in October, 1917. In the following March he was found to have a right breast agreeing in all respects with that of a young girl at the beginning of puberty. Investigation showed that the right testicle had been involved in the injury. Such behavior has been known to follow only mild lesions of the testis—never severe traumatism or total destruction or castration. The precise mechanism cannot be comprehended but both the nervous and endocrinic systems must be involved.—La Presse Medicale.

CAESARIAN SECTION VS. ANY OTHER METHOD OF TREATING ANTE-PARTUM ECLAMPSIA.*

By Dr. D. A. Stanton, High Point, N. C.

In presenting this paper I shall make no attempt to explain what Puerpural Eclampsia is or its cause. When we are confronted with a case as probably every one present has been, we are confronted with a condition on which there is no time to theorize. Action is imperative for the safety of two lives. The treatment in days gone by was blood letting, morphine, tinct. of Veratum Viride et cetra. All recognize that the early emptying of the uterus affords greater safety to mother and child than any other one thing which could take place, but so often happens that there is no effort on the part of nature to establish labor, and the trauma incident to forcible dilatation and mechanical means for delivery is so great that to thus deliver a woman is only adding insult to injury, jeopardizing a life which is already hanging in the balance.

What is the best course to pursue?

Caesarian section answers the question.

With our present knowledge of surgery, with a hospital in reach of almost every physician, good roads, and automobiles for quick transportation, but few hours at most are lost in getting the most distant case to the surgeon or getting the surgeon to the patient. In cities where there are hospitals only a little time is needed. The operation is quickly and easily done with less trauma than a forcible delivery. Why not take the shortest and safest route for the patient's safety? These patients are all toxic and the emptying of the uterus is the one thing most necessary for recovery. A Caesarian section should be done just as quickly as possible after the first convulsion, for by so doing we have done what is recognized as the best that can be done, namely, emptying the uterus.

In the cases coming under my care for the past few years on which I did Casearian sections (12) in number, two died. That is a high mortality, but it was not the operation that killed; it was the toxemia and the delay in operating. Had the uterus been emptied as promptly in these two cases as in the other ten no doubt but they too would have been living today.

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*Read before the recent meeting of the N. C. Medical Society at Pinehurst, N. C.

As quickly as possible after the first convulsion get your patient to a hospital or get a surgeon to the patient. Give 1-4 grain morphine, and 1-150 atropin, and have the patient prepared for operation. An incision through the right rectus beginning two inches above the umbilicus and extending two inches below is made. Thus when the uterus is emptied and sinks down there is no danger of adhesion between the abdominal and uterine scars. The uterine incision is longitudinal from the top of the uterus downward from 3 1-2 to 4 inches in the median line, no attempt being made to avoid the placenta.

I do not go directly through with the first cut, preferring to work through in to the uterine cavity with the handle of the knife so as to avoid injury to the child or cord. With scissors the incision is then completed to full length. Sometimes the dextrorotation of the uterus is so great that the left tube appears in the abdominal wound and some manipulation is needed to make the median line accessible. Care must be taken to cut at right angles to the surface as otherwise a shelving incision is made and good apposition is not so easily secured. While the child is being removed an injection of I. C. C. of Pituitrin or ergotle is given in the gluteal region. After the removal of the placenta the interior of the uterus is gently rubbed over with gauze to insure the complete removal of the membranes. When there is little or no dilatation of the os some operators advise pushing a strip of gauze through the os. This I have never done, dilatation and drainage having always been satisfactory. The uterine incision is closed by three layers of sutures, the first being of interrupted sutures of No. 2 chromic gut through the muscular layer only. I prefer this method to the continuous sutures which some operators like. The next layer consists of continuous sutures of No. 1 chromic but, which unites the surfaces of the wound, and the needle is made to enter and emerge close to the edge of the incision. This makes the closed wound a narrow line over which the visceral peritoneum is easily drawn by a second No. 1 chromic cut. A scar in this situation is not so liable to strain and stretching as one in the lower uterine segment would be. The liability to rupture is therefore less. In closing, the edges are everted so the peritoneum is applied to the peritoneum and adhesion is less likely to take place between the scar and the viscera or omentum.

THE FABLE OF THE DOG IN THE MANGER: ANCIENT AND MODERN VERSIONS.

By Esopus, Jr.

More than 2,500 years ago Aesop, a Greek slave, gave an example of selfishness in the fable of The Dog in the Manger. This may be stated as follows:

A dog once made his bed in a manger and lay there snarling and growling at whoever came by. When the oxen came from their day's work he would not allow them to eat the provender since he wished to use it for a bed for himself. The oxen said: "What a miserable cur! He cannot eat the grain himself yet he will not allow anyone else to eat it, but makes his bed there instead of elsewhere from pure selfishness."

A modern version of this fable illustrates a present day condition which makes it worth telling.

We will call it Miasma County, because that name is most appropriate; but we won't name the State, since such counties are found in all parts of the South. Now Miasma was down in the Ague Belt and Malaria and Hookworm and Typhoid and Diarrhea were and had been plentiful as far back as the oldest inhabitant could remember. The county needed many things in the way of progress, but more especially things like soap and water, paint and tooth brushes. The death-rate was something fearful, being largely of the kind called preventable. The hookworms were of a ferocious type, with appetites for corpuscles that were insatiable, and the malaria was the kind that can be put up in tins and sent from place to place. Every family in the county had an open surface privy, if any at all, and everybody took quinine except the lady principal of the county high school and she took quin-een. It was the rule and fashion for everybody to be in a run down condition from these causes and to be predisposed to typhoid and diarrhea—and these diseases did their part.

By far the most prominent citizen in Miasma was old Doc Richards, the county physician. Doc had a reputation that reached up and down the road and he had long been the big thing in the way of county politics. Among the laity, Doc was looked upon as a kind of walking directory of all that is in the universe; and he did his part toward keeping up the impression. He went about dispensing what is technically known as hot air and always wore a watch fob that pulled the

button holes out of his vest, in this way showing that he belonged to one of the old and influential families. Doc wasn't well up on modern medicine, but he was a successful practitioner. He always carried a can of wintergreen lozenges and called everybody by his first name—and that was all that was necessary in Miasma. It was as county physician that Doc was a shining star. The Board of County Commissioners regarded him as the real thing and the only one in the county who could properly hold down the job and give advice what is advice. Why, Doc had been county physician for years and years, stood in with the better element, and had a political pull that was enough to make or break or change a board at every election, if he desired. Of course, from Doc's standpoint the $85.00 per was the real thing that made him hold on to the job, although he had repeatedly state that except for the good he could do Miasma County and humanity at large he wouldn't have the job if it was handed to him on a platter with water cress around it.

But the old order changeth and, no matter what happens, Progress spreads; even if many of us are inconvenienced by it and are forced to change our manner of thought and way of living. And so it came about that a few poorly paid school teachers and two or three young doctors who were jealous read up on the vital statistics of the State and had the audacity to compare the county's health record with that of other counties, and they even went so far as to put a piece in the paper about it and to interest some business men in demanding that the county employ a whole-time health officer as some of the adjoining counties were doing. Now, a whole-time health officer does away with the office of county physician; and Doc Richards was the first to see that this would be more expensive for the county and, in order to protect the poor tax payers, he opposed the movement.

On a first Monday a delegation of business men and the Woman's Club appeared before the board and asked for action. The matter was discussed pro and con and it began to look like progress was making a killing. It was actually demonstrated that one baby out of every four born in Miasma County died before it was two years old. At this point Doc explained that vital statistics largely depended on the thoroughness of reports and that Miasma's rate was high because he, the county physician, encouraged the people to make these reports. A young doctor, just out of the hospital, asked Doc why the typhoid death-rate in Miasma was ten times higher than the State's death-rate from this disease; incomplete reports couldn't account for such a vast difference. The delegation wanted the county to co-operate with the State authorities and have the State Board of Health appoint a health officer, one who had been trained in health work, and supervise it.

There just ain't no telling what would have happened if Doc hadn't got an opportunity to motion to the chairman to come into the ante-room where the register of deeds keeps year-before-last's tax books, the kindling wood, and the mop. After this consultation the chairman called the board into executive session and asked Doc to meet with them, since they were to discuss the county's health situation.

At this executive session, Doc explained the whole situation to the board. He told how co-operation with the State Board of Health meant the signing away of the county's rights and personal liberty and expressed his belief that the Board of County Commissioners of Miasma County knew more about the county's needs than any State Board that ever hopped; and, also, that the people had entrusted the board with the welfare of the county—otherwise they wouldn't have been elected to office. The way Doc burned up the State Board of Health, it's a wonder the insurance department didn't get after him for arson. But Doc had troubles of his own. On the Q. T., his practice had fallen off and the high cost of living was getting his goat. He made the board understand that he had always been doing things for and to the poor and that he was benevolent to beat the band, and furthermore that he knew the county much better than an outsider could ever know it. In a word ,the people wouldn't put up with having their taxes increased to pay a fancy salary to a rank outsider—maybe some Northern Yankee who wouldn't understand Miasma and her ways. The board was of the kind that believed everything they read in the papers and when Doc got through he could tell by the scared look on their faces that he had knocked a home run.

Well, the board was in a dilemma and a barrel of pickles. Doc and the poor, oppressed tax-payers were on one side and the drove of women and prominent citizens on the other. The only thing that

could be done was to appoint Doc as whole-time health officer and raise his salary from $85.00 to $200.00 per month. This was done and the county and State papers heralded the progressiveness of Miasma County. And Doc issued a statement telling of the wonderful things he planned to do. By the end of the year he hoped to run out malaria and the hookworms and make typhoid and baby diarrhea back numbers. In a word, the death-rate as soon as it heard that Doc had been appointed health officer was expected to roll over and come down and eat out of Doc's hand. And in this manner Miasma's got a whole-time health officer.

Doc made quite a hit. He visited all the schools and told the teachers to examine the children, saying that he would drop around next year and give more directions. He wrote to the State Board of Health and to the Congressman and the Senator and got all grades of health literature which he packed in the rear of the grand jury room in the court house. Also, he offered to vaccinate anybody for typhoid fever if they could catch him in his office. Doc, of course, had to spend some time reading public health literature because he wanted Miasma to have just as up-to-date a health officer as nybody's county. Then, he had to attend health meetings, whenever the county would pay his expenses. But where Doc starred was in the health speeches he made at school breakings and Woodmen's and Juniors' rallies. Doc always did like to go where there was plenty to eat and so accepted all invitations because he knew it would be a great opportunity to tell the people how great the county was and how it was able to conduct its health work without the aid of the State Board of Health or of anybody or anything. They even asked him to make a health talk at the Chautauqua because he was the only person in the county that would and could make more noise than the merry-go-round. And so Miasma had health work for two whole years and thought she ranked high among the counties of the State, and some of her citizens thought that she had the grandest health officer that ever swept up the Boulevard.

But the hookworms and mosquitoes didn't keep their contract with Doc; and typhoid fever was about as gay as ever and infant diarrhea acted like it had never heard of a health officer. The vital statistics report showed Miasma's death-rate to still be up among the highest branches and that it still grinned and didn't show any signs of coming down. When election time came the folks decided that the county was spending too much money and put in a new board, committed to decrease expenditures. This board's first action was to vote out the county health officer, demonstration agent, supervisor of schools, and allow the county to go back to the good old times when each family took care of itself without having the county or State meddling with its personal affairs. There was no opposition to this. Doc had proved conclusively to everybody's satisfaction that health work is of no value and is just propaganda to furnish jobs to young health officers who are too inexperienced to make a living at practice.

And so it will be many a day—probably a generation—before Miasma County will again appropriate money to save the lives of her babies and the health of her citizens. Although fire is an excellent thing, a burned child is afraid of it, even if he was burned by using the fire in a way he was warned not to use it. But Doc is still the county physician and draws his $85.00 per.

As in the ancient version of the fable of the Dog in the Manger, the moral or morals of the modern version are evident.

Slow Convalescence.

The strong, virile, robust individual who emerges successfully from the attack of the pneumococcus, the bacillus influenzae or the mixed infection of typhoid, is more than like to recuperate rapidly from the depressing effects of the systemic disease from which he has suffered, and his convalescence will be prompt and uninterrupted. It is not so however, with the patient, whose vital resistance was at a comparatively low ebb before the disease invasion. In such cases, tardy convalescences is the rule, unless active measures are taken to revitalize the blood and thus restore and repair the essential solid elements—the red cells, and the oxygen-carrying hemoglobin. Pepto-Mangan (Gude) performs just this necessary service by furnishing the needed organically combined iron and manganese to build up the blood forming functions of the organism. It can also be depended upon to improve the appetite and act as a general tonic, and reconstructive, without deranging digestion or causing constipation.

MEDICINAL AGENCIES IN LABOR*

By Annie L. Alexander, M. D., Charlotte, N. C.

The chief concern of the obstetrition for his patient is safety. Safe delivery of a living child to a happy mother.

To relieve pain and to prevent shock during parturition are of great importance.

The morphine scopolomine combination, known as twilight sleep, treatment, has largely fallen into disuse. I have no personal knowledge of its use. Those who have used it most intelligently give it an important place in the first stage and the early part of the second stage of labor. The use of it requires the constant attention of an experienced physician and good nurse from start to finish. It is impossible to tell how the combination will affect a highly nervous patient. It may soothe her or she may become highly excited and hysterical. It may cause asphyxia in the child. It may prolong labor and the use of forceps may be rendered necessary.

Morphine 1-8 grain, atropine 1-150 grain in the first stage of labor is highly efficacious in relieving nervousness and promoting dilatation with lessened suffering.

The bromides are of importance and value in relieving nervousness. Ten or fifteen grains of chloral hydrate by rectum relieves nervousness and promotes dilatation.

Hysteria in labor, which is rare, may be relieved by giving 1-20 to 1-10 grain of apomorphia. One of my patients with hysterical convulsions responded nicely to 1-10 grain.

During the second stage of labor, nitrous oxide and oxygen have their strong advocates. Their use requires experience and skill and is not adapted to the use of the average physician with the great majority of patients. They are not suitable for surgical proceedures nor prolonged anesthesias. Ether and chloroform are exceedingly useful in the second stage of labor. The choice of the two anesthetics lies with the physician. To mitigate suffering in the second stage, I almost invariably give chloroform, just a few whiffs at the beginning of each pain. It renders the pain less acute and more bearable, and encourages the patient to use voluntary effort.

Chloroform is less disagreeable and more quickly influences the patient, and she more quickly resumes the normal than with ether. Near the end of the second stage the woman is rendered unconscious at the moment the child is born, waking quickly with no bad results.

In doing a version, or forceps delivery or any operative proceedure requiring prolonged anesthesia, ether of course is given the preference.

No woman should be allowed to pass through labor without an effort being made to mitigate her suffering as much as possible.

Pituitrin has a distinct and limited field of usefulness. When it was first introduced it was hailed as a substitute for forceps. The many accidents which occurred, rupture of the uterus, lacerated perineum through precipitate delivery and death of the child from pressure, showed pituitrin to be a two edged sword.

When the pelvis and foetal head are in proportionate size, the cervix dilated, the head well down in the pelvis, or on the perineum, and all that is needed is a little more force, then pituitrin can be safely given. If the head is not on the perineum, a second dose may be necessary to complete the delivery, as the effects of pituitrin last only thirty minutes.

Five drops will produce as strong contractions as fifteen, the effects lasting just as long.

For checking or preventing post partum hemorrhage, pituitrin is the best remedy we have for instant use. It must be followed by ergot as its effects are brief.

Ergot which at one time was used extensively to increase contractions and hasten delivery, has been practically abandoned, because of the hard tonic contractions and the resulting dangers it produced. It should be given only after the uterus is empty to maintain sufficient contractions to prevent hemorrhage and stimulate involution.

*Read at meeting of N. C. Medical Society at Pinehurst.

Sleeplessness. — Peacock's Bromides bring about sleep in a natural manner, that is, by producing a physiologic cerebral anemia. This well-known preparation is safe as well as effective and the administration of two to four teaspoonfuls an hour or two before going to bed will produce a sound, restful sleep, from which a patient will awaken refreshed, rested and entirely free from the depression and ill effects so common to other hypnotics. Peacock's Bromides do not disturb the stomach nor induce a habit.

PITUITARY EXTRACT IN THE MANAGEMENT OF LABOR.*

By Thurman D. Kitchin, M. D., Wake Forest N. C.

The pituitary body or hypophysis cerebri, a small ductless gland weighing about seven and one-half grains (0.5. Gm.), situated in the sella turcica, consists of two parts, an anterior lobe of glandular structure and a posterior lobe chiefly of nervous tissue. That these two lobes should have entirely different functions is not so strange if we recall that they are distinct embryologically, the anterior lobe arising from an invagination of the buccal ectoderm, while the posterior is an outgrowth from the floor of the third ventricle and is connected with this ventricle by means of the infundibulum.

The knowledge concerning the function of this gland has been obtained by the two usual methods of study. First, by studying the effects of removal of the gland as a whole and then of the lobes separately; and second, by studying the effects upon animals of extracts of the whole gland and then of extracts of each of the lobes separately.

Concerning the anterior lobe, suffice it to say, that ext racts when injected into animals yield no immediate results, but that removal of this portion of the gland causes death in a few days, and that disease of this lobe produces marked changes in the growth of the individual. For example, hypertrophy of this lobe during youth causes gigantism and in later life acromegaly, while under-activity, as in case of tumor of this portion of the gland, produces obesity and sexual infantilism.

Extracts from the posterior lobe, on the other hand, when injected into animals produce immediate and characteristic results (extracts from the posterior lobe usually contain also some of the pars intermedia.) When extracts from this lobe are injected into the circulation, either intravenously or intramuscularly, there is in about three minutes a rise in blood-pressure, increased peristalsis of the intestines, and increased urination. In the Wake Forest Pharmacological Laboratory, five minims of pituitrin injected into the artery (vesical branches) supplying the bladder of a rabbit with the viscera exposed caused the bladder to contract and expel its contents within thirty seconds. Seven minims of pituitrin injected into the superior mesenteric artery of a rabbit caused active intestinal peristalsis in one minute. In dog with carotid artery connected with mercurial manometer, one c. c. of the pituitrin injected into the jugular vein produced a perceptible rise of blood-pressure in three minutes and maintained the rise for about fifteen minutes. In these blood-pressure experiments pituitrin not only raised the pressure above the normal but was also efficient in overcoming low pressure resulting from inhalations of amyl nitrite. In cases with the blood-pressure previously lowered by the use of amyl nitrite, the pressure was raised as high as in the cases that had received no amyl nitrite. (All done under thorough general ether anesthesia.)

In a nursing animal pituitary extract causes an immediate increase in the flow of milk both in amount and in fat content. This increase in the flow of milk is later compensated for by a decrease, so that for the twenty-four hours there is no real increase. Accordingly, it is reasonable to believe that it does not stimulate milk production but that it stimulates the plain muscle of the mammary glands and thus forces out the milk already formed. This extract also inhibits the flow of saliva and pancreatic juice. This action may be explained by the constriction of the blood vessels in these glands, due to stimulation of the muscular coats of the arteries, because we know that ordinarily the activity of these glands is accompanied by dilatation of their blood vessels, while injection of the pituitary extract does cause vaso-constriction of these vessels.

But the crowning effect of the extract of the posterior lobe of the pituitary body is on the uterus. Although it stimulates all smooth muscle, it undoubtedly has a selective action on the muscle of the uterus. If a solution of this extract is applied to an isolated section of the uterus of the guinea-pig or rabbit, the muscle responds at once with increased tonus, stronger and shorter contractions, and quicker relaxation, showing that the effect is not dependent on nerve connections. The extract acts by coming into direct contact with the plain muscle fiber. The action is local and not central. Lieb found the same effect upon the human uterus removed at operation.

This action is a great deal more pronounced on the pregnant than on the non-pregnant uterus. This remarkable fact may possibly be explained by assuming

*Read at the meeting of N. C. Medical Society at Pinehurst, N. C., April 16.

that during pregnancy the anterior lobe of the pituitary produces some substance which sensitizes the uterus to the internal secretion of the posterior lobe. This view is strengthened by the fact that during pregnancy the anterior and middle portions of the pituitary body undergo hypertrophy, but the posterior lobe does not enlarge, and yet only the extract from the posterior lobe stimulates the uterine muscle. As further evidence that this view is possibly correct, we may recall the phenomenon of anaphylaxis. The term anaphylaxis is used to designate a group of alterations of functions which occur when an animal is reinjected after an appropriate interval with the same protein solution. These alterations do not occur when the same dose of the protein solution is first injected. This may be made clearer by citing the fundamental guinea-pig experiment. If a normal guinea-pig is injected with a small quantity of normal horse serum, the animal shows no discomfort from it and acts in no way unlike its normal mates. This first dose apparently produces no harm, yet certain profound changes have really taken place. For if this animal is reinjected with the same horse serum after the lapse of several weeks, it now responds with severe and characteristic symptoms and may die, indicating that the organisms has been made susceptible, or has been "sensitized" to this substance. Thus an apparently inactive substance becomes a very active substance after the animal is sensitized to the effect of the substance.

With this knowledge of pituitrin obtained, there is no wonder that the obstetrician and practicing physician at once realized that a new and effective weapon was added to their armamentarium. So by combining laboratory experiments with clinical experience, one of the most notable achievements in the history of obstetrics has been made. We need now no longer resort to the use of forceps in cases of uterine inertia. Pituitrin will readily and safely overcome that difficulty. In such case sthe tired doctor and still more worn patient are relieved without necessity of an operation. In fact, this remarkable agent has almost relegated the forceps to the instrument museum, in cases of uncomplicated delayed labors.

After we have made certain that there is no obstruction in the birth canal and no contraindication to its use, we should administer hypodermically to the parturient patient one-half cubic centimeter (seven and one-half minims) of pituitrin. But before doing this we should have everything ready and should not leave the patient after administering it, because in the great majority of cases strong labor pains will begin in from three to ten minutes, and usually there is no let-up until the child is born. If one dose does not accomplish the purpose, it is safe and advisable to repeat the same dose every twenty minutes until three doses are given. If these do not prove sufficient, it is needless to continue, and in such rare instances it will be necessary to fall back on the forceps. It is important to remember that in cases of uterine inertia the power of this drug to prevent postpartum hemorrhage by keeping the uterus firmly contracted is as valuable as is its power to bring forth the child.

However, it is not the object of this paper to praise the pituitary extract; it needs no praise. Its daily use by the practitioner attests its value. It is rather my purpose to point out some of its dangers, for like any agent which has the power to do good if rightly used, it has the power to do harm if wrongly used. It should not be used until the os is dilated sufficiently to admit at least two fingers; otherwise, it might contract the os and lead to rupture of the uterus. If there is any obstruction in the birth canal, or if the position of the child is unfavorable, the powerful contractions of the uterus caused by the pituitrin may cause rupture of the uterus. Too early use of the extract may cause premature separation of the placenta. Again, if used too early, before the birth canal has had time to dilate and prepare for the oncoming child, there might be laceration of the cervix and perineum, due to precipitate delivery. Also too frequent and powerful uterine contractions may cause asphyxia in the new-born. That these dangers are not imaginary is seen in the citation by DeLee of eighteen cases of rupture of the uterus following the use of this extract. After studying 7,600 labor cases Vogt lays stress on the frequency of death of the fetus following its use. Mundell has collected twelve cases of ruptured uterus, thirty-four cases of fetal death, and four cases of asphyxia of the new-born after the use of this extract.

Conclusions:

1. In uncomplicated cases of uterine inertia and when the cervix is dilated, the pituitary extract is an ideal agent, prompt and safe.

2. In badly selected cases it is po-

tent for harm. Corruptio optimi pessima—the best thing ruined proves the worst.

3. Pituitary extract should be regarded by the physician as a man regards his pistol, legitimate and useful when really needed, but improper and dangerous when not needed.

A Triumph of Preventive Medicine.

The war has been almost from beginning to end a veritable triumph for preventive medicine. In the term preventive medicine is included hygiene and especially personal hygiene. By paying the strictest attention to sanitation in its broadest sense and by carrying out in the minutest details the laws of hygiene, wide spread epidemics have been avoided and the health of the fighting forces has been conserved in a remarkable manner.

The prophylactic treatment of wounds comes within the meaning of the term preventive medicine, and therefore not only vaccine treatment, but all other measures used to inhibit the growth of infectious germs may be comprised under the head of preventive medicine. In the prophylactic treatment of wounds, and of those wounds in particular, in which the presence of anerobic bacteria had been detected or was suspected, it was found that oxygenation was the most potent method of inhibition. Kenneth Goodby, one of the best known bacteriologists of England definitely demonstrated that in the prophylactic treatment of wounds, their oxygenation as accomplished by their irrigation with peroxide of hydrogen was the readiest and most effective means of destruction. Anerobic bacteria cannot exist, nor indeed can any bacteria, in an oxygenated atmosphere and consequently the war has taught, as one of its lessons, from the preventive standpoint that oxygenation of wounds should be regarded as a routine treatment. Oxygenation can be most easily and thoroughly done by irrigation with peroxide of hydrogen, and the most reliable form of peroxide of hydrogen is Dioxogen on account of its purity, stability, and oxygen-liberating powers.

In countless homes, factories, offices, etc., Dioxogen is being used for hygienic and first-aid purposes, on the explicit advice of medical men who have learned from their own experiences its efficiency and freedom from all objectionable action whenever and wherever a potent germicide is needed.

SOME OF THE DESTRUCTIVE DELUSIONS OF NARCOTIC DREAMLAND.

By James L. Tracey, M. D., Toledo, Ohio.

The Text.

* * * "They cling to it as a Brahman clings to his religion. They decline to accept it as a bad habit. They refuse to apologize for their liking, or to treat it as a secret vice. At some time in the life of nearly every one of them, at moments of stress and decision, in hours of anxiety, in days of pain or in seasons of unhappiness, they have leaned, and they have leaned hard, upon tobacco for guidance, relief or resignation—and have found their hopes repaid. They are not likely, these men, to turn upon a friend so kindly."

This quotation is taken from the editorial columns of a great daily newspaper, in which editorial the writer sought to defend—and from his dreamland viewpoint of the narcosis he did defend the practice of self-demoralization of the mental, through the use of tobacco.

The Light of Journalism.

In the newspaper world there are today no Henry Watersons, no Horace Greelys. The present time is the dark age of American journalism; and in the above excerpt some writer is hiding the light of true journalism behind commercialism or is hiding behind something else that he thinks may affect the circulation of his paper, while he is holding up as a mental condition ennobling to mankind, the effects of the enervating dreamland seductions of nicotine narcosis. The writer tells of the cowardly hold that tobacco has upon its victim, and in considerable of detail names the life trials, under whose load the degeneracy weakened stamina of "men," breaks down.

As a matter of course there are not now such editorials—there can not be such editorials as when great moral and sociologic principles proudly honored writers for having both the moral courage to state soul convictions, and also the courage to underwrite their convictions. The dignity of the principle written about, oftentimes was, in willing self-sacrifice, a costly dignity to the advocate of the principle; but the cost was only the assessed price of all worthy human achievement; and then after the fight was over, the defended and befriended proposition handed back to the fearless writer, as payment for his loyalty to conviction, the inesti-

mable reward of a name that will live, over night!

For some reason the times are not today giving Halsteds and Whitelaw Reids to the editorial world. Possibly there are many agencies of evil to humanity at work, to prevent the bringing forth of great newspaper men; but whatever the cause of the journalistic dark age, the fact hurtful to the nation is, that men in great newspapers are writing to the people about physiology, and the writers themselves are not physiologists. Men who are not psychologists, are writing about psychology; and as in the above case, men write about sociology and economics who ignore the function of biologic laws, that foundation all constructive civilization movements. Indeed, it would be difficult to anywhere find statements more harmful because of variance with the known laws governing in the sciences dealt with, than this editorial writer in his attempted defense of tobacco-using, has sent out to the reading public as his ideas upon biology and physiology. The wonder of it all is, that the silly unmanliness of his plea for the use of tobacco does not of itself, drive readers in the other direction; but it requires no courage to write his delusions, and there is very much of cowardice in the human make-up, that is willing to be catered to.

Evolutionary Law.

Medical men, probably more often than any other class of men, are continually being reminded of the impartial and unchangeable workings of eternal law. Medical men know that the editorial writer in the great newspaper is really dealing, not with cowardly evanescent emotion as appears, but he is dealing with the law that governs human life—that governs living, physically, mentally, and economically everywhere in the world of humanity. Medical men are conscious that there is only one law at work, or rather that only law is at work regardless as to whether men study law as it applies to morality or sociology or to economics. Medical men do not pray over-much for the recovery from disease either physical, mental, or moral. Emotion does not go. They know that the natural course of disease, is just as much governed by biologic law, as is physiology a manifestation, of the working out of physiologic law. Medical men do not pray that sins against biologic law may be forgiven. They know that such can not be done. They know that all acts of men are biologic seeds, and they know that when a particular seed has been sown, it is going on to a particular biologic harvest regardless of any prayer offered, that the seed may be blasted, and regardless of anything else. Medical men know that the germ of moral disease has the same vitality, as has the germ of physical disease. They know too, that somehow the germ of mental degeneracy seems to be even more insistent, upon being heard, than can be accounted for biologically, from a study of histology.

The writer of the editorial is unconsciously, or perhaps narcotically dealing with the law of heredity. He is dealing with a one-sided heredity. He is dealing with the fact that "men" (He does not refer to women; but since when have women not borne at least an equal share of life's trials!) have had handed up to them from past experiences of jungle life, the degeneracy instincts of love for the sense of irresponsibility of ease and freedom from care, that goes with, and that has been passed up to them from a one-time barbaric ancestral existence. A barbaric existence by the way, that is not so very remote either; yet notwithstanding, man is not entirely dominated by hereditary degeneracy instincts, nor indeed is he even equally and alike retrogressively, and progressively inspired. On the contrary, the balance of the power of uplift always has been and is on man's side of the game; so that from age to age, man does actually climb a little higher. But on the other hand, there is enough of degeneracy inclination brought over from ignoble past, to wreck a man, if he gives way to its destructive impulses. And that degeneracy inclination is the unworthy thing in men—is the thing over which the editor is shedding a tear. It is this willess thing in men that sees hobgoblins in the honorable task of trying to be a man among men; it is the degeneracy instinct that the writer says, "leans hard upon tobacco" for the bringing about of a sense of oblivion to the tormenting demands of duty and obligation to mankind!

The real physiology of any narcosis is, that the output of such narcotized nerve and brain cells is not as good and as dependable, as are the functionings of normal cells; while the pharmacologic fact is, that the one who is feeling the effects of the narcotic is handicapped by the hallucinatory delusion that all of his powers have been very greatly increased, by the narcotic. The handicap of nicotin in many different scientific ways, has been proven to be not less than ten per cent. The science of cold business demands, has rul-

ed cigarette narcosis out of the factory because of this loss of efficiency; and if in war the lives of a hundred normal minded men could complete a task, then the coldest kind of cold scientific fact points out that a hundred and ten men will be required, when handicapped by cigarette narcosis!

Loss From Hindered Normal Reaction to Stimulus.

Of all the narcotics, nicotin the most markedly, inflates the ego. Such an ego can not be reasoned with. The narcosis is outside of reason. To narcosis anything that interferes with the narcosis, is irrational. This phase of narcosis need not be argued. The statement is self-evident. Hence from the point of view of the nicotin dethroned will, the editor is bound to write cowardly nicotin illusions. To the editor nicotine, in a rather doleful way of course, solves life's problems. In contrast to this cowardliness the normal minded man, in his reaction to the usual problems of life, courageously studies the problems, works with them and rises above them, and thus exalts the man.

The editor writes whiningly of "moments of stress," of "hours of anxiety," of "days of pain" and all that, and then under the spell of unmanly nicotin illusion, feels that he justifies men for failing to make helpful use of the purposely sent disturbings of contentment!

Discontent is the constructive dynamic of the world. Nepenthe, is the destructive dynamic of the world. Medical men know though, that in these statements regarding dynamics, there is paradox. They know that real victory over discontent, brings true contentment. They know too that constructive discontent, whined about, breeds the unrest of anarchy—breeds destruction. Medical men know that man rises or falls right there. Right there the immaterial discontent becomes matter, and on the one hand this discontent rightly used, and guided by the law of the universe, builds into the structure of civilization, the elements of perpeuity and of peace; but on the other hand wrongly used, the immaterial discontent guided by eternal law, builds into the structure of civilization the destructive elements of all kinds of warfare. Medical men know that wars are not haphazard catastrophes. They are simply the harvests of former sowings.

One day—tomorrow in conformity with the program of a "Thanksgiving proclamation" the people will "give thanks for the continuance of conditions of peace," either in the public dance, the football game, or in worship in the churches; and medical men know that one of the performances is just as effectual as the other in the prevention of bloodshed. The mockery of the whole thing! Because out of the "conditions of peace" for which thanks have been given, other wars will grow—war will grow because after designed beneficent discontent has been made over into a curse, one phase of warfare is already on!

The Narcosis Itself.

Nicotin narcosis as written about by the editor, has nothing whatever to do with a man's getting into heaven. Obviously the man who merely violates physiologic, psychologic, and biologic law will not on that account, be kept out of heaven. He writes about a bigger question than that of right and wrong. He has in mind the ethics and asthetics involved in the practices of tobacco-using, when he tries to raise nicotin narcosis to the level of "a secret vice." There is absolutely no secrecy manifested in the use of tobacco. On the contrary the narcosis prompts the man to make parade of the fact that he is using tobacco. The editor is dimly conscious of the violation by nicotin of the first principles of ethics and esthetics in obtruding tobacco-using practices upon the defenseless, and by the use of nicotinized logic tries to get himself to think of something else.

While nicotin narcosis must of necessity be of different intellectual levels in the educated and uneducated, the narcosis is of the highest brain centers—of the ethic and esthetic centers in all classes of men. The college professor is no more careful to keep his tobacco smoke out of the nostrils of other people, than is the boorish man. The inhibition by nicotin of the highest centers, leaves each man fully convinced that tobacco using practices are good enough for wife, and children, and for home, and hence plenty good enough for every body else. The college professor can't smell his own tobacco smoke on the clothing of his wife, as she dresses to go out. Such would of course, be a physiologic impossibiliy; but if he did know that her clothing smelled of his smoke his comforting dreamland logic would be that if he didn't smoke, he would get her into something worse!

The argument of the editorial writer, is stock tobacco argument, but is entitled to thoughtful attention because it is advice offered to young and old by a great daily newspaper!

West Woodruff Ave. and School Place.

TREATMENT FOR SOME OF THE EMERGENCIES IN OBSTETRICS. ASPHYXIATED INFANT. POST-PARTUM HEMORRHAGE. PLACENTA PREVIA, AND ECLAMPSIA.*

By J. R. Alexander, M. D., Charlotte, N. C.

In this article it is the purpose to give only the emergency treatment for the above emergencies, and that not in detail, as the article would be too voluminous.

The writer has always held that the ordinary, common, every-day general practitioner, in which class he is proud to place himself, and also the trained nurse, should know more about "Obstetrics" than any other branch of medicine. In other emergencies the physician has the time to get assistance to share his responsibilities, and even to read up on the case, but not so in the emergencies of obstetrics, for when you meet them, and meet them you will if you have any obstetrical practice, it will be right up to you, not some one else, to handle the case skillfully or unskillfully, and to handle them skillfully you must know what you are going to do before you have the emergency, not learn it after you are in the case, as you must act quickly—there is no time to consult a text-book and often you cannot get a consultant before it i stoo late. By making thorough examinations before labor, and after it has started, you may be able to detect what will be an emergency, and prevent an emergency.

Asphyxiated Infant.—As treatment of Asphyxiated Infant deals only with the infant, it is probably not considered as serious as the others, but it is very important to know exactly what to do to resuscitate an asphyxiated infant. Three principles should govern the treatment. First, clear air passage from obstructions; second, maintain body heat; third, supply oxygen to the blood. The mouth and nostrils should be cleansed of mucous, etc., as soon as the infant's head is delivered; as soon as the body is delivered the infant should be raised by the ankles. This allows the fluid in the upper air passage a chance to run out before the child gets a chance to draw it into the lungs with the first gasp for air, and it is dangerous to perform artificial respiration when the Trachea Bronchi, and sometimes the Alveoli are full of amnoetic fluid, meconium, blood or vaginal secretions. This must be remedied before an attempt is made to bring air into the lungs. The importance of keeping the baby warm is not generally appreciated. The baby should be reecived in warm towels and kept wrapped up as much as possible during subsequent manipulations. I do not take much stock in the common practice of putting the baby first in a cold basin of water and then a hot one. The one is too much of a shock—the other too exhausting. Sprinkling with cold water or a slap is preferable, and you will likely get as good results without the dangers of the former method. If the fluid has not all run out of the upper air passages, the use of the tracheal catheter can now be used to good advantage for get ting out the fluid by passing it into the trachea and sucking the fluid out and afterwards by inflating the lungs with it. The most important way to get oxygen into the blood is by artificial respiration by one of the various plans that have been suggested; probably the most powerful, and under some circumstances the most dangerous method, is that of Schultze Swingings. "The child is grasped with thumbs over the front of the chest, index fingers on each axilla to prevent it from flying out of the operator's grasp, the three fingers of each hand distributed over the back; the head is held steady by a pressure with the wrists; the accoucheur stands planting the feet wide apart; the child is slowly swung up over the head, so that the feet fall downward and thus held for a few seconds. This is expiration, and often foreign bodies are emptied from the air passages. An assistant removes this with the little finger wrapped in gauze. Now the child is swung out farther and down between the legs, letting the motion begin and end very even and gently. An audible inspiration should accompany this movement."

It is well to alternate between the artificial respiration and in inflating the lungs either by mouth to mouth or trachael catheter. The baby should be given some time for rest, and should be warmly wrapped. One thing that I have gotten splendid results from is by putting spirits of camphor in the heart of the hand and applying to the fontenells; it acts both as a counter-irritant and as a quick stimulant. If the baby begins to breathe very weakly, and appears exhausted, give it a

*Read before the recent meeting of the N. C. Medical Society at Pinehurst, N. C.

few drops of brandy or aromatic spirits of ammonia.

Post-Partum Hemorrhage.—By far the most important treatment for Post-Partum Hemorrhage is "prevention," but that phase of the treatment will not be taken up in this article ,as it is not an emergency. However carefully we may practice "prevention," we will have some cases of Post-Partum Hemorrhage. When we do have a case, the first thing to do is to find out the site of the hemorrhage—is it a pacental site or is it from lacerations. If it is the latter, contraction of the uterus will not control it, if it is not in the uterus. If the hemorrhage keeps up after the uterus contracts, hunt for the lacerations and suture them up. The first treatment for Post-Partum Hemorrhage is to grasp the uterus through the abdominal walls and massage it vigorously; at the same time have the nurse give the patient a hypodermic of some sterile form of ergot, or if this cannot be had, give one dram of ergertole by mouth. As a rule as soon as the uterus contracts, the hemorrhage ceases. Should the bleeding continue, it is necessary to remove the Placenta, if it has not already been delivered, whether or not a tear is found. After having massaged the womb vigorously, in the moment of contraction, perform crade expression. If this does not deliver the Placenta, after thorough trial, it should be done manually. The patient is put across the bed, the buttox well over the edge, the legs are held in a lithotomy position; the accoucheur sees that his instruments, basins with antiseptic solutions, gauze for packing the uterus, and the intra-uterine douche are all prepared and within easy reach. As this is a dangerous operation, on account of infection, the accoucheur should be absolutely sterile, with sterile gown and gloves; the external genitalia should be scrubbed and disinfected, and it would be well for him to use a piece of sterile gauze on his gloved hand for cleansing out the uterus. In cases where the Placenta has been delivered and hemorrhage caused by the uterus not contracting, on account of either pieces of the Placenta or Blood Clot in the uterus, the uterus should be emptied of these particles and douched out with a hot, sterile douche. I prefer to use the rubber tube instead of the nozzle. If the douche does not stop the hemorrhage, after the uterus has been thoroughly cleansed, it would be well to use small pieces of ice, that have been in sterile water, placing these in the uterus by the hand, and then packing the uterus with sterile gauze, beginning, of course, at the Fundus and packing well. Stimulate the patient as may be needed in any case of shock, using normal salt solution, either by hyperdomoclisis or directly into the vein; camphorated oil, adrenalin, digifolin, etc. Do not give morphia or an aesthetic; elevate the foot of the bed—some advantage may be derived from strapping the lower extremities.

Placenta Previa.—The treatment will depend largely upon the location of the placenta, whether it is centralis, that is, the placenta attached as over os-uteri or whether the placenta is partially covering the os-uteri, commonly called marganalis, or to the side of the uterus, which we call lataralis; also as to whether labor has already advanced, and the amount of hemorrhage the patient is having. If the hemorrhage is not great, it will be far better to get the patient into a hospital. At any rate, the accoucheur should have one good assistant physician, and two trained nurses, if possible. During labor our first object is to stop the hemorrhage, and the second, emptying the uterus. There are three ways by which the uterus can be emptied—the first, Cesarean Section; the second, bringing on labor by the aid of rubber bags, distended by water to dilate the cervix; the third by rapid dillitation, and delivering the Foetus by Podalic Version. Cesarean Section raises the mortality for the mother, but lowers it for the Foetus. However, if there has been much hemorrhage, or trauma, Cesarean Section should not be considered, and only under the most favorable conditions, and where extenuating circumstances exist, should it be done. As to the use of rubber bags for dillitation of the cervix and controlling hemorrhage, I am not favorably impressed; it does not always control the hemorrhage—you cannot tell if the patient is slowly bleeding inside the uterus, and often it does not dilate the cervix, and after using the above method for hours, and the patient has been weakened by loss of blood, finally the uterus has to be emptied by the rapid method. If possible get the patient on a table, if you cannot get her to a proper operating room. If the hemorrhage is bad, rapid dillitation will have to be done at the home, but it is best to put the patient on a table, an ordinary kitchen table will do. Cleanse and shave the parts as for any vaginal operation; have patient completely anaesthetized. This, I think, is often the cause of lacerations and shock to the

patient ,because this important detail is not carried out. The legs should be flexed upon the abdomen. It is scarcely necessary to mention the importance of being absolutely sterile, as the accoucheur is attempting to do a far more dangerous operation from infection, than a laparotomy. He should have taken al lthe precaution to prepare the stimulants that have been suggested to be used in Post-Partum Hemorrhage. After the patient has been anaesthetized, and after finding where the Placenta is attached, he should go into the cervix so as to disturb the placenta as little as possible; first, dilate the cervix fully, if the hemorrhage is not too great to prevent dillitation. The dillitation should be made by the hand, this being the best instrument that has ever been invented for rapid dillitation of the cervix, though the dillitation may be started by a rapid dilator. After dillitation has been completed, the hand should go inside of the uterus when the bag of water is ruptured, and if possible, get both feet. If only one can be gotten, bring it down outside of the vagina and lasso it with a sterile bandage lasso, then let it go back in the uterus, and by this time you can probably get both feet in one hand. Grasp them so that they will be brought down with the toes toward the hollow of the mother's sacrum. If at any time, while the hand is in the vagina, if one of thebaby's hands is protruding, lasso it also, as it will be a great assistance in bringing down the hands, if they are above the head in "after coming head." The reason the feet should be brought down with the toes turned toward the mother's sacrum is, that this makes the baby's chin rotate so that it is in the hollow of the sacrum, which makes the head much easier to deliver. As soon as the feet are delivered, the extremities and body should be kept covered with a warm, dry towel to prevent the baby from trying to breathe before the head is delivered. Some advise to only bring the foetus down until the buttox is down on the perineum, and allow Nature to take its course. They claim that this does not exhaust the mother as much as completing the delivery, but I do not think so. The danger of hemorrhage is not over until the oFetus is born, and the placenta delivered, and the uterus contracted. The dangerous part of it to the mother is in turning the child, and not in delivering the after coming head, but all of it should be done while the mother is anaesthetized and the quicker it is over the better it is for the mother, and certainly for the child, provided, of course, it is done in the proper way. Traction should be made carefully and not by jerks, and should be made in the right line; ten pounds of traction in the wrong direction may do more harm than one-hundred and fifty pounds in the right direction and in the right way. It will take some time to deliver the arms, especially if they are over the head, and if you have a lasso over one hand it will be of great assistance in delivering the first one, and the second arm is much easier to deliver than the first. Be sure not to make Traction upon the body until both arms are delivered. It should take about four minutes to deliver the arms and from two to four minutes to deliver the after coming head. The head should be delivered by putting two fingers in the mouth, which should have rolled to the hollow of the sacrum. Traction should be made in this way on the lower jaw with the body of the child resting upon the arm that is in the vagina—the other hand like a "Y" across the neck; gentle traction in this way should be made, remembering the curvature of the vaginal canal. At the same time the assistant should make pressure above the mother's public bones, on the after coming head. This will be of great assistance. I think the rapid delivery is far preferable to the slow method, and I cannot agree with those that think it causes great shock to the mother. There is danger of ruptured uterus or lacerating the cervix, but not near as much if the mother is well anaesthetized. There is more danger if the bag of water has ruptured, and the foetus is well down in the pelvis before the operation is begun.

Eclampsia.—The mortality in Eclampsia is still from 20 to 45 per cent of the mother and 3 0to 60 per cent for the child. Such high mortalities rarely accompany surgical complications, hence the patient deserves as much, if not more, consideration, than does the surgical patient. She deserves at least two good physicians, two trained nurses, and, if possible, hospital facilities, and since now every locality has automobiles, and as a usual thing the roads are so that they can be traversed any time of the year, it is only a matter of one or two hours until a patient from any locality can be gotten into some hospital. There are three general plans of treatment—two extremes and one occupying the middle position. Duhrsens Dictum, is ,after the first convulsion, put the patient in a deep sleep and deliver at

once. The other extreme is to put the patient to bed, give her narcotics, such as chloral, morphine, using stimulants, bleeding, etc., and await the natural termination of pregnancy and labor. Those accoucheurs, occupying the middle position, use medical treatment more or less and hasten the labor, if the patient's condition is evidently going from bad to worse. Experience is accumulating to prove that the rapid emptying of the uterus, with the patient thoroughly anaesthetized, after the first convulsion, gives the best results. Peterson collecting 615 cases of early delivery, as soon as possible after the first convulsion, finds the mortality 15 9-10 per cent and compares this with the same mortalities of 28 9-10 per cent of the same maternities, under so called conservative treatment. Another table shows 4 per cent and 31 per cent respectively. R. Freund reports 551 cases of "eclampsia" from the Berlin Charite, which were delivered within an hour, with no deaths. The method of delivery should depend largely upon the advancement of labor. If labor is advanced so that the cervix is dilated and the head engaged, forceps should be applied and the foetus delivered while the mother is under anaesthesia. This, of course ,could be done immediately, and at the patient's home, but otherwise the patient should be removed, as suggested, to a hospital. As Cesarian Section still shows a very high mortality, it is far preferable to dilate the cervix by either the rapid dillitation, or by the use of a rubber bag, distended by water. I do not think that where the mother has had a genuine convulsion, that the slower method is at all feasible, but think that the rapid dillitation, under the same plan as suggested in Placenta Previa, is far safer. I hope no one will construe what I have said in regard to rapid dillitation of the cervix, orpodalic version, as being slight operations. They should not be employed unless there is a pathological condition, justifying their use.

In conclusion, it has not been my purpose to bring you any new or easy plan for handling these emergencies, but rather to impress upon the general practitioner that he should have some definite plan for treating these cases. I have endeavored to show how I have cared for them, but do not claim my way to be the only or most scientific one, but I claim that I have successfully put them into practice, and this is what I think every physician that is going to practice "obstetrics" should do—is to have his plans well matured, that he can put into practice not only in the four emergencies that I have called to your attention, but to all other emergencies in "obstetrics." Nothing should so appeal to the general practitioner. Are not the mothers and and newborn babies the mainstay and hope of the home, and is it not in obedience to the first Divine Command given to us to "be fruitful and multiply, and replenish the earth and subdue it," that the mother is in this condition? And is it not on account of confidence in your skill that you have been engaged to attend her? Therefore, should we not merit the confidence that has been placed in us.

The Relief of Sciatic Pains and Lumbago.

Despite the dicta of certain philosophical physicians that pain should be endured, and indeed is, after all, but a beneficent reaction of the nervous system against threatening forces, relief from pain will be sought by all. In fact, it is obvious that long continued pain exhausts, while excruciating pain, as that of sciatica, urgently calls for relief from the standpoint of rational therapeutic practice. To draw attention to one feature of pain alone which demands, at least, its temporary subjection, reference may be made to insomnia. It is patent that sleep is impossible so long as acute pain is present and it is also clearly apparent, that sleeplessness, lasting over a period, will sap the strength of the strongest constitution. The strong prejudice that exists against overcoming pain, is mainly because the result is often, perhaps usually, obtained by the employment of narcotics, which although affording the longed for effect, not only upset the digestion but what is worse by far may and frequently do establish the drug habit. Phenalgin is a remedy for pain which acts with a sure and uniform efficiency, and at the same time does not lock up the secretions, upset the digestive functions, nor bring about a drug habit. In other words, Phenalgin relieves pain without exerting any injurious action on the human mechanism and permits and encourages the physiologic forces of the body to work at normal speed. The use of Phenalgin, therefore, is of the greatest service in the treatment of pain from all sources for the reason that it does not interfere with the vital forces of the body but if depressed from one cause or another gives them an opportunity to recuperate and regain their normal tone.

THE IMPORTANCE OF THE ROUTINE STUDY OF THE FECES.*

By Dr. L. E. Farthing, Wilmington, N. C.

The war has taught us many of our shortcomings and needs; the draft boards having had some of them forcibly exhibited to them. It is not the scope of this paper to speak of the more spectacular of them, but to try to show some of the reasons why, we, as physicians, should make more examinations of the feces than we have, even in individuals not especially suspected of being infected with intestinal parasites. We have known all the time that efficiency is the thing that counts in anything that is worth while. The period that we have recently passed through has taxed humane ingenuity to the utmost, not only in the fighting of battles, but in performing the other things incident to the war were equally as exacting ,and as the draft officials were forced to lower the standard of physical and mental requirements no less than a half dozen times ,it seems that something is wrong that should at least be attempted to be remedied.

Now ,naturally, we would suppose that an individual infected with intestinal parasites could not be as efficient as he would be if he were not infected, even though he be apparently normal, which condition was actually shown to exist by Dr. Stiles in the examination of 1,652 school children of Wilmington, N. C., as to physical development and mentality even in children with a light infection, varying somewhat with the species of parasitic infection, being more marked with the Necator infection. These children were grouped for consideration into those having sewer connections to their homes and those that did not, and with only a few variations which could be easily accounted for, in that the children that had sewer connections in their homes, were exposed to the privies of the homes that did not have the sewer connections in the radius of their plays, those children from homes without sewer connections, gave a higher percentage of infection than did the children from homes with sewer connections.

While Dr. Stiles does not think that all the mental and physical retardation is due to the parasitic infection, yet, his, and other statistics bears us out in the belief that the retardation is largely due to the parasitic infection. I think it would be only natural that these children who are host to parasites would be somewhat dwarfed in mind and body with varying degrees according to individual resistance, degree of infection as well as to the species of infection. The Necator seemingly being the more capable of producing retardation stigma. Just why we have varying degrees of retardation with the different parasitic infection is not clear to us, as the Ascaris being a larger worm than the Necator, we would suppose that it would be a greater drain on the host to furnish nutriment for the larger worm and thus cause more retardation, but this is not the case. From this we would naturally come to the conclusion that it is not the loss of nutriment that the parasite draws from the host, but more to the toxins eminating from the parasites.

Not only is an individual not as efficient that is infected with intestinal parasites, but is more susceptible to other diseases, also such persons are infection stations for others and expose all of us to unconscious coprophagia.

Dr. Shore tells us that of the 389,822 examinations made of feces from every county in the State, except Ashe, that about one-third were infected with the Necator, the more heavily infected counties being the southeastern and the southwestern groups. The infection seems to be unevenly distributed over the State, there being certain counties with a heavy infection whereas an adjacent county being lightly infected, also one valley in the hill country being heavily infected, and an adjacent valley being practically free of infection. This shows that the disease had not become as generally distributed as it might, and I think we can thank the hook-worm eradication work that has been done, for its check. The recent examinations made at Wilmington as well as at the State Laboratory show that the disease is on the decrease; this should not in anywise lessen our efforts, but rather be a stimulus, as it shows that we can get results.

The old pathognomic sign of worms was "Presence of worms on the feces" was good as far as it went, but, if we, as physicians, wish to make the diagnosis. we must adopt as our pathognomic sign, "Presence of ova in the feces."

We often work hard and study much to make a diagnosis, but this is one means of making a diagnosis that is really very easy. With very little experience we are able to make these microscopical examinations, and if we do not care to make

*Read before the N. C. Medical Society meeting at Pinehurst, N. C.

them ourselves, the State Laboratory is always ready to make them for us; so it seems that it would be almost inexcusable to not make a diagnosis of this kind, though the writer has had occasion for reproach as well as embarrassment for not having made a microscopical examination of the feces.

If we make these examinations of the feces it will not only aid us in the diagnosis for parasites, but will reveal many other things incidentally that will be of great help to us in treatment of the patient.

We want to get our population intestinal parasite free, not only to make them bet ter soldiers, but make them better citizens, and possibly better still, they will keep us out of wars. The Necator seems to be the one most productive of evil effects and fortunately it seems to be the one most promising of being eradicated, and then we want to be on the sharp lookout for new parasitic infection in our returning soldiers and others who have been in other parts of the world and stop its spread in the beginning.

It is the opinion of the writer that if we, as physicians, make or have made a routine examination of the feces of as many of our patients as possible, administer treatment to those infected, give the necessary instructions as to the cooking of foods, especially meats, and forever do away with surface privy, we will have in a few years done away with intestinal parasites.

Syphilis in the Debilitated.

A mistake many make is to crowd mercury in debilitated syphilitics because of an obstinate lesion. nI all probability in such cases the condition is made worse rather than better by further reducing the patient's resisting powers through increased mercurialization. What these patients need is increased resistance that the natural recuperative powers may be brought to normal, thus permitting better utilization of the specific treatment.

oFr this purpose a tissue food such as Cord. Ext. Ol. Morrhuae Comp. (Hagee) is indicated and should be employed. In fact, with many physicians the plan of treatment in all cases includes Cord. Ext. Ol. Morrhuae Comp. (Hagee), their logic being that by its use the resisting powers of the tissues are increased and in consequence the disease is diminished in virulence.

SOME STUDIES WITH QUININE AND ITS SALTS.*

By W. T. Parrott, M. D., Kinston, N. C.

My observations both on man and animals corroborate the findings of the various authorities as to the kidney, heart, heart muscle, stripped and unstripped muscle and the paramecium, ciliated organisms, and amoeba; but as to administration and absorption and certain important effects on the nervous system, there is a very great error in the books. As to the nervous system there are two well defined phases of cinchonism when quinine is administered by the stomach and any close observer can differentiate these phases. The first phase is due to the irritant effect of the drug on the nerve terminals in the stomach (likened to the irritant effect of ipecac when given by mouth) and this phase is not the phase of absorption and anyone depending on this phase as a criterion to absorption is mistaken. Furthermore this phase may occur without the second following it. The second phase is that coming on up to 8 hours and is the stage of absorption. It may appear earlier and is likened to the alcoholic headache of "Next Morning." The important point clinically is that this phase will not appear unless there is actual assimilation.

As to absorption the teaching is and has been for years that quinine is absorbed "mainly by the stomach." Physiologically this is impossible. The ability of the stomach to absorb anything is very slight. The absorption of quinine, too, is mainly in the intestine. There would be many fatalities from quinine if the acid solutions were absorbed from the stomach into the alkaline blood; especially the large acid solutions of quinine which authors tell us to give. The acid solutions only do good as solvents but the reaction is changed when it enters into the alkaline small intestines and begins absorption. Here nature is very kind to us and very promptly converts the acid salts of quinine into alkaline products before she sends the quinine into the alkaline blood. Again these highly acidulous solutions of quinine only intensify the nauseating bitter taste of the drug, often causing the practitioner and family to announce that the quinine would "Not stay on the stomach." In these cases—if the quinine was given not with an acid but

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with an equal quantity of an alkali (bicarbonate soda for instance) the alkali after reaching the stomach would stimulate (as is the usual effect of an alkali) the gastric juices to H C L formation which in turn physiologically dissolve the quinine and send to the intestine in solution and ready for physiologic assimilation. Now as to the statement so widely published in the books and accepted by the profession that quinine is not absorbed by the skin. That is true if an acid or nearly neutral salt is used. Here the alkaline blood and tissues resents the insult. I have demonstrated quinine in the urine quite a number of times after rubbing a magma made of quinine (alkaloid) and distilled water, to which enough bicarbonate soda had been added to make it strongly alkaline to litmus. This method is very useful in that form of malaria accompanied with gastritis and where quinine in any form by mouth is continuously rejected.

Since the first phase of "cinchonism" may come on without absorption, ringing in the ears, (tinnitus aurium) the first phase is not a dependable sign of assimilation.

We sometimes hear well trained medical men make statements like this: "I obtained no results from quinine in that case of malaria and he had 'cinchonism' too." The trouble is "cinchonism" does not always indicate absorption unless both phases are present.

The scientific method is to demonstrate the drug in the urine. Then you are sure it has been assimilated. This is easily and simply done. Four cubic centimeters (4 c. c.) of urine are warmed—not boiled—a few drops of T. S. Bromine are added—if quinine has been absorbed, it will show a slight or heavy precipitate, depending on the amount of absorption. The addition of a few drops of ammonia water strikes an emerald green.

The following table gives a fairly accurate idea of the absorption of the various salts of quinine when given to the average simple tertian, quarton or quotidian infection—provided there are no gastric manifestations to thwart it. It is calculated from the time of administration of quinine until its first appearance in the urine:

Hydrochloride 15 to 20 minutes.
Bisulphate 20 to 30 minutes.
Citrate 20 to 30 minutes.
Acetate 20 to 30 minutes.
Sulphate 40 to 50 minutes.
Tannate 2½ to 4 hours.

The tannate hardly ever appearing under three hours. Furthermore I can demonstrate that their bitter taste is directly proportional to their solubility. The clinical lesson from this table is this: use either one of the first four where quick action is desired or when transfusion of the drug is unnecessary or contra-indicated. I find the ordinary sulphate; while slower of assimilation fully as effective as any of the more soluble salts. The tannate is an excellent salt given at late bed time because its action will be derived in the early morning hours and just when the malarial organisms are beginning their activity. It can be replaced by a more soluble salt during the waking hours.

In a general way the acid salts are "harder on the stomach" and this is one reason for my preference of the sulphate or some nearly neutral salt for oral administration.

My observation of the use of the soluble salts intromuscularly has ben very disappointing. The tissues have nearly always resented the insult with an abscess, or the drug has been "capsuled off" and remained in situ until I removed it by incision, in one case, after many months. I have for this reason the same objection to its use hypodermatically or by hypodermoclysis. When we learn to make alkaline solutions of quinine, I fancy we shall have entire success with sub-cutaneous injections. In the intensive forms of malaria, as for instance, the comatose form—I am a strong advocate of the intra-venous method. An ordinary solvorson outfit is all that is required and the drug should be as nearly alkaline as possible to prevent precipitation. The absorption of quinine by rectum is much greater than ordinarily supposed though not constant. By the bladder there is greater absorption. Using a high frequency current, I have good results by cataphoresis.

Resume.

1. Cinchonism unless demonstrated in its entirety not a dependable sign of assimilation. Testing the urine simpler, **quicker** and more accurate.....

2. The textbook statement that "quinine" is absorbed mainly in the stomach" is a glaring error. Very little quinine is ordinarily absorbed before it reaches the intestines.

3. Strongly acid solutions are unnecessary and objectionable. Acid solutions intensify the bitter taste and bitterness is the prime cause of "quinine nausea."

Alkalis administered before or along with quinine ,stimulate H C L secretion sufficiently to bring the quinine in solution within the stomach.

4. The administration of quinine intramuscularly should be abandoned.

5. The intra-venous administration of quinine—properly done—is the best of all methods and should be used in certain selected cases.

6. The absorption of quinine by the rectum is partial. The bladder preserves this ability to a degree.

7. Quinine in an alkaline magma can be rubbed through the skin.

8. The high frequency current as well as galvonic is capable of transmitting the drug.

The Neglected Therapy of Convalescence.

The physician of education and experience, who keeps in touch with the progress of medicine generally, is well informed as to the treatment of most of the "thousand and one" ills that he is called upon to combat. The diagnosis and treatment of acute conditions as well as the successful management of the more chronic affections are subjects which he is constantly investigating and studying. It so happens, however, that after the dangerous shoals of medical navigation have been successfully negotiated and when the crisis or danger point has been passed, the physician is all too liable to relax his vigilance and to allow the patient to convalesce without sufficient attention to the therapeutic details of this important period. While the feeding of the convalescent is of great importance, the medico-tonic treatment is equally essential, in order to improve the appetite, tone the digestive, assimilative and eliminative functions generally and to hasten the time when the patient shall be once more "upon his feet." Among all of the general reconstitutent and supportivve measures in the therapy of convalescence, none is more essential than the reconstruction of a blood stream of vital integrity and sufficiency. Pepto-Mangan (Gude) is distinctly valuable in this special field, as it furnishes to the more or less devitalized blood the necessary materials (iron and manganese in such form as to assure their prompt absorption and appropriation. One especial advantage of administering these hematinics in this form, is that digestive disturbance is avoided and constipation is not induced.

DAKIN'S SOLUTION IN THE TREATMENT OF EMPYEMA.*

Report of a Case by Roswell Elmore Flack, M. D., Asheville, N. C.

Before attempting to treat the subject under consideration, it would not be out of place to review briefly, in part, the literature on the Carrel-Dakin method of wound sterilization.

Dakin, in 1914, (1) began the study of wound infection and to search for a suitable antiseptic with which to treat them. This was imperative, as war wounds are mass infections, on account of which vaccine therapy proved to be of little value. After testing out over two hundred chemical substances, old and new, he found the chloramines best suited, and of these the hypophosphite of soda.

At first, only suppurating wounds were treated with Dakin solution. Such favorable results were obtained in this type of wounds, that fresh wounds were also treated. After May, 1915, it was evident that wounds were sterilized.

The report of Carrel, Dakin and their co-laborers, of their method of treating wounds was not accepted by many physicians and surgeons of the allied armies. For as late as 1915 (1) no less an authority than Sir Almroth Wright said that "The treatment of suppurating wounds by means of antiseptics is illusory, and the belief in its efficacy is founded upon false reasoning."

According to Carrel (1) wounds are sterilized by a threefold combination: first, a bactericidal substance; second, a certain concentration; third, duration of application. Each single part is essential to the rest of the combination. If one part should be changed, the others also must be changed.

The concentration of Dakin solution is very important. A .45 to .5 per cent. solution gives the best result.

According to Sherman (2) the American doctor was not so skeptical and did not condemn the Carrel-Dakin method of treating wounds, without investigation. He found the method to be a life-saver and a time-saver.

He further states that sanitation and preventive medicine have made far greater strides than the surgical handling of industrial and military wounds. During the Spanish-American War, the deaths from sickness outnumbered the deaths

*Read before the Buncombe County Medical Society, December 2, 1918.

from wounds in a ratio 6-1. From Canadian statistics, deaths from sickness and deaths from wounds are in a ratio 1-20—a remarkable change.

Prof. William H. Welch, in a letter to Dr. Bevan, published in The Journal of the A. M. A. (3) says that he observed the Carrel-Dakin method of wound sterilization employed at Compiegne, and was most favorably impressed. He further states that Carrel's work in no way conflicts with the teachings of surgical pathology. The chemical sterilization of wounds is accomplished without cellular injury, and for this reason influencing favorably the repair of wounds. "Carrel's work is fundamental on this point."

The recent report (4) of the empyema commission, Camp Lee, Va., detailing the treatment of empyema, is very encouraging.

The Commission had the opportunity to observe one hundred and forty cases of empyema in which the haemolytic streptococcus was associated. Ninety-three cases were postoperative and convalescing upon the arrival of the Commission; the remainder were preoperative and postoperative. Of this number, there were twenty-three successive cases in which the Commission directed the entire treatment. Out of this series only one death occurred, the mortality being 4.3 per cent. The average mortality reported from the various camps was 30.2 per cent. The highest mortality reported was 84 per cent. out of 85 cases.

This great reduction in mortality was effected mainly in three ways: First, forced feeding. Second, delayed operative interference. Third, postoperative treatment.

1. Forced Feeding.

The patient loses strength and weight and rapidly and to lessen this loss a diet of 3,00 to 3,500 calories is given. A standardized diet is urged at the first. Any loss from failure to eat all the food is made up by intermediate feedings of milk, eggs, cocoa, etc. Also some easily assimable carbo-hydrate, as lactose, may be given in a beverage and a glucose solution intravenously or per rectum.

2. Delayed Operative Interference.

In the streptococcus infections the disease is a pleuritis rather than a post-pneumonic infection. The exudate is serofibrinous and forms early and often rapidly. The exudate becomes purulent usually in from two to three weeks and the exudate of a postpneumonic infection is usually purulent when found. This is a very important observation, as it establishes a time for drainage. Thorracotomy was performed in the series.

3. Post Operative Treatment.

Post Operative Treatment consisted in administering to 11 cases, some antiseptic of the chlorine group. One half per cent solution of Dakin gave the best results. The technique of Carrel was adhered to. The quantity of the Dakin's solution instilled each time depends upon the size of the cavity—not more than 200 cubic centimeters. The time between instillations being one hour at first, during the day, and three hours at night. The treatments are individualized to suit the needs of the case.

The favorable impression of so many physicians of the Carrel-Dakin method of treating infected wounds suggested to the writer the possibility of sterilizing the pleural cavity with Dakin's solution. This suggestion was accepted by the late Dr. Silvio von Ruck, under whose direction and supervision the method to be detailed was instituted. The first treatments were given by him. The case report follows:

Mrs. S., Record No. 7390. Winyah Sanatorium. Age 47. Was admitted October 22nd, 1917. Family history: One brother died of tuberculosis. Personal history. In 1897, twenty years previous, patient had slight attack of pleurisy. The present illness dates from September, 1917, at which time patient had cold, cough, bloody expectoration and pleurisy over right lower lobe. Physical examination: moderate retractions over both upper fronts. The percussion note was markedly impaired over the right upper front and back. Flat over right lower lobe. Slight impairment over left front. Auscultation disclosed an old lesion in the right upper lobe, with small cavity in the first interspace, in which fine, dry rales were heard after cough. Breath sounds were weak over the middle and upper right lower lobes. Over this area fine rales were heard. Breath sounds were absent at base. Evidence of a small arrested lesion in the left upper lobe. Pulse 140. Temperature 102. Respiration 30. Weight 115 pounds. Loss 10 pounds.

October 25th. 500 cc of clear amber fluid, slight offensive odor, was aspirated from right side. Culture made and growth obtained.

October 31st. 300 cc purulent exudate aspirated, fecal odor.

November 2nd. 600 cc of purulent ma-

terial obtained. 500 cc of .2 per cent Dakin's solution introduced; 300 cc withdrawn, leaving 200 cc in pleural cavity.

November 3rd. 700 cc fluid aspirated; 600 cc of .25 per cent. Dakin's solution introduced and aspirated; 200 cc introduced and left in cavity.

November 4th. 400 cc fluid aspirated; 350 cc Dakin's solution, .25 per cent introduced and aspirated; 200 cc introduced and left in cavity. Smears were negative for organisms and culture for growth.

November 5th. 200 cc fluid aspirated; 500 cc of .25 per cent introduced and reclaimed; 500 cc introduced and left.

November 6th. 200 cc fluid aspirated; 500 cc of .5 per cent of Dakin's solution introduced and reclaimed; 500 cc introduced and left.

November 7th. 400 cc fluid aspirated; 500 cc of Dakin's solution. 5 per cent introduced and reclaimed; 500 cc introduced and left.

November 8th. 400 cc of fluid aspirated; 500 cc of one-half per cent Dakin's solution introduced and recalimed; 500 cc introduced and left.

November 10th. 350 cc fluid aspirated; 500 cc one-half per cent Dakin's solution introduced and reclaimed; 400 cc introduced and left. Smears positive for organism and culture for growth.

November 13th. 450 cc of fluid aspirated; fecal odor.

November 21st. A resection of the eighth rib posterior to the posterior axillary line was performed and drainage tube placed, through which one-half per cent. Dakin's solution was introduced one to two times a day.

Three abscesses formed in the chest wall at the level of the ninth and twelfth dorsal vertebra, two of them were located posteriorly and one anteriorly. The abscesses were drained, and from the one situated at the level of the twelfth dorsal vertebra about six ounces of pus obtained. Two rubber catheters were now introduced—one toward the apex of the cavity and the other towards the base. Every two hours during the day and every four hours during the night 100 cc of one-half per cent Dakin's solution were introduced. These irrigations were continued for a week without any apparent influence on the fever or the well-being of the patient. Patient was discharged January 8th, 1918, unimproved, gradually losing strength and weight. Her fever the day before her discharge was 101 F.

In the preparation of Dakin's solution normal salt solution was used, in order to establish an osmotic equilibrium.

Laboratory report by Dr. V. E. Hazlewood and Mr. O. E. Stockinger, of the Winyah Laboratories:

Sputum:

October 23rd, 1917. Negative for tubercle bacilli; a few large diplocci; pus and epithelial cells.

November 17th, 1917. A few tubercle bacilli; streptococci, diplocci and numerous non-acid fast bacilli.

Exudate from pleural cavity.

October 25th and October 31st. Numerous polymorpholeucocytes; pneumococci; streptococci and non-acid fast bacilli. (Culture and smear from exudate).

November 23rd, 1917. The following organisms were identified from the exudate: streptococcus, B. coli; B. subtlis or hay bacillus and an unidentified bacillus. White cell count on October 25th was 25,000.

Summary.

First, thoracocentesis is more simple and easily performed than thoracotomy.

Second, no change of dressing is required. The demand upon the staff is not so great, as only one treatment is given every twenty-four hours.

Third, the method appears to be safe, as no toxic symptoms from the solution were observed.

Fourth, it appears that the pleural cavity can be sterilized by this method.

Fifth, organisms from smears and cultures were not demonstrated after the second treatment.

Sixth, organisms reappeared when the treatment was given every forty-eight hours.

Seventh, from typical septic fever, which was not materially influenced by any treatment, and from the similarity of the infetcing organisms of the exudate and sputum, one may infer that there was an abscess that drained into the pleural cavity. This offers a plausible explanation as to why the cavity did not remain sterile.

Eighth, the X-ray plates showed no evidence of an abscess, which could have been obscured on account of a very thick pleura, and a large amount of fluid.

Ninth, further investigation of treating empyema by this method is indicated.

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INTUBATION—A DIFFERENT WAY.*

By Drs. Daniels & Daniels, Goldsboro, N. C.

Intubation as practiced today is done in two distinct ways. The original O'Dwyer method, and by direct Laryngoscopy.

The O'Dwyer method is very difficult for the beginner and one that does not have much intubation to do, and even to the experienced sometimes is very difficult. This method is carried out by the sense of touch and guesswork. Direct Laryngoscopy you see exactly what you are doing, but it is rather difficult except by the most experienced, and is a method not much in general use.

The method Iam going to describe is a semi-direct method, and one any physician can perform, who can use a head mirror and a tongue depressor.

Instruments used. An O'Dwyer intubation set, which comprise, an intubator and extubator and set of hard rubber or gold tubes, of varying size. A self-reing mouth gag, one that opens mouth equally on both sides (one illustrated is preferred by me). A tongue depressor that is rigid, light and will not slip and does not allow tongue to protrue through fenistra in blade. Two artery forceps to hold mops. And one head light that is lighted from a pocket battery, and one that throws converging rays of light. My preference is a Klaar light. A library or dining table that is rigid and not too high.

The method of performing semi-direct intubation is as follows. The child should be wrapped in a sheet or blanket from the neck to its feet, so as to pin down the arms to the side and keep the feet closely approximated. Child should be placed on table near the left edge, with head on table and in straight line, and held by two assistants. One assistant holding head, and the other holding shoulder and body.

The operator standing on right of patient with intubator, with proper size tube ready. Puts mouth gag in mouth and open mouth as wide as possible, then with tongue depressor in left hand, insert same into mouth and well back on dorsum of tongue, press tongue downward and forward until epiglottis is plainly in view and on a horizontal plane, then with intubator with intubation tube, in right hand under the guidance of the eye, place tube under the undersurface of epiglottis and in contact with same and on a horizontal plane, push tube into larynx. Now drop tongue depressor in left hand and with left four finger, placed on tip of intubation tube, push same into larynx as far as rim of glottis, at same time release tube from intubator. Turn child on side to allow mucous to run out, and the job of intubating is finished.

Very frequently when you first open mouth it will be so full of mucous that you cannot see epiglottis, then mucous has to be wiped out.

Extubating. To me is most difficult if I have to use an extubator, but this can be done as described by O'Dwyer, and by my semi-direct method. I preferably leave stout braided silk in tube, and never had this pulled out by child. In case silk is chewed into, I use direct laryngoscopy.

As to nursing and after treatment, etc., you can find in any standard text-book as I have nothing new along that line.

*Read before the recent meeting of N. C. Medical Society at Pinehurst, N. C.

Cod Liver Oil in Debility of the Nervous System.

In debility of the nervous system permitting loose play in the system's functioning, there is a pointed indication for an agent of a general nutritional character.

For such a purpose Cord. Ext. Ol. Morrhuae Comp. (Hagee) has shown itself to be of much value. Not only does it tone up the nervous system through offering nourishment to the entire economy, but more narrowly it serves as a direct food agent to nervous tissue itself. This general and specific nutritional value of Cord. Ext. Ol. Morrhuae Comp. (Hagee) gives it a high place as an indicated agent in let-down states of the nervous system. Thus, in the extreme nervousness following a protracted illness, Cord. Ext. Ol. Morrhuae Comp. (Hagee) may be used with the best assurance of success, the debility of the nervous centers being overcome by the high food value of this palatable cod liver oil preparation.

CASE REPORT—AN UNUSUAL DEFORMITY: AN UMBILICATED NIPPLE.

By C. W. Hunt, M. D., Brevard, N. C.

An inverted nipple, the nipple depressed as if a normal nipple had been pressed on its point and pushed into the mammary gland. The place where the nipple should have been looked like a deep naval.

Patient stated that this deformity had always existed, there never having been a nipple.

Was called to see the possessor of this nippleless mammary gland, a young married woman with her first baby. The latter four weeks old.

There was no opening through the place where the nipple should have been and it was impossible for the milk from this breast, otherwise normal, to make an exit.

Results: I found hardened "cakes all through the gland and two abscesses, and patient pale, weak, emaciated and suffering agonies.

Two physicians had been called to this woman before I saw her, and had allowed above results to occur.

I gave a hypo. an H. M. C. tablet and lanced the abscesses. Results, a great amount of pus and an immediate relief from pain. I gave medicines and directed applications, for the purpose of drying up the milk immediately.

Took the baby at once from the mother's breast. Her milk was of a poor quality on account of blood state, etc. And because as long as the baby nursed from the normal breast the formation of milk in the otherwise normal breast, with the deformed nipple continued and repeated abscesses would form indefinitely.

The baby was a little dried up emaciated specimen of humanity and looked as old as if it was its own grandmother. Was nearly starved to death, a mass of skin, bones and wrinkles.

Ordered applications of olive oil for babe and later secured a wet nurse. Results, a great improvement in forty-eight hours.

Preventive treatment for the future, when this woman recovers her health and strength, I will advise her to have the breast removed, the one with a navel for a nipple. So that when the next baby comes she can nurse it from the normal breast.

If I am not mistaken the above is a very unusual kind of deformity of the breast and as well as I can remember this is the first case of the kind on record.

In that illuminating work on Obstetrics by Doctor DeLee, I can find no mention of anything like it.

Avitaminoses in the Army.—Bruntz and Spillman (Le Progres Medical), consider this subject very exhaustively. By controlling clinical experience with feeding experiments on animals important discoveries seem to be in the making. Thus it may be possible to bring trench foot under the rubric of a deficiency disease. The subject matter is considered under eight heads. The first section deals with generalities in connection with vitamines, and contains nothing new. The quantity necessary for life may be infinitesimal, but since a certain amount of sterilization will destroy them the most abundant and best balanced ration could be denatured by excessive cooking and preserving processes. Artificially prepared vitaminiferous substances quickly suffice to remedy the deficiency diseases, and are therefore of diagnostic value. The authors mention but two types of deficiency disease, viz., scurvy and beriberi. Such simple and available remedies as beer yeast and lemon juice suffice to make good the severest types of deficiency.

The second section is devoted to the richness of the soldiers' rations in vitamines. These comprise fresh, frozen, tinned, and preserved meats and fish, bread, vegetables, fats, coffee, wine, etc. Which of these foods are vitaminiferous? Meats, both fresh and frozen, breads not made of white flour, potatoes, lentils and lima beans, and new wine. Which are free from vitamines? All tinned, smoked, and salted provisions, sterile milk, and decorticated grains of any kind. The effects of heat must now be added. Foods apt to be damaged by overcooking are roasted and boiled meats and beans, etc. Anything cooked to a crust, whether meat, bread, or vegetable, is damaged as to its vitamine content. Since it is extremely difficult to draw a line here, underdone food, when digestible, must have precedence. The men who have been fed for days on preserved foods rush with avidity upon raw carrots and turnips and unripe fruit when nothing else avails. No scruples stop them in this quest. There is also an instinctive repugnance to foods which contain no vitamines, such as decorticated rice. This is so common as to suggest a physiological defense reaction.

The third subject for consideration is clinical avitaminosis, but this is quickly

dismissed because all are familiar with the phenomena of scurvy, Barlow's disease, beriberi, and pellagra. Next to be considered is experimental avitaminosis. No original work is mentioned, but there is a resume of the recent finds of Weill and Mouriquand. It is demonstrable that two types of deficiency disease can be generated in the same animal at the same time, and this has also been confirmed in human pathology, as cases of associated scurvy and beriberi have been reported.

The fifth section is devoted to the relationship between trench foot and deficiency in vitamines. Certain factors in the genesis of the former are cold and moisture, compression, maceration, neuritis, infection, etc. Interest centers around the element of neuritis—one whose activity seems assured. This is recognizable in animal experiment in which it is able to cause edema. Mild neuritis may also exist without trench foot. The cause of the neuritis is evidently internal, and to a large extent the latter may be regarded as the parent lesion, the others being contributory. The differential diagnosis between trench foot and simple frostbite has long been possible, and different degrees of cold are required to produce the two. Trench foot has been seen outside of the trenches. There is some evidence to show that rice-eating Arabs suffered more promptly and severely than Europeans on regular rations. Trench foot has actually been seen in the warm months, and could then be readily explained by diet. The Japanese had peripheral neuritis before Mukden, which was, of course, frankly called beriberi. The relation of trench foot and edema from underfeeding has not yet been traced.

Sixth, the authors consider all of the war maladies which could possibly be classed as wholly or in part avitaminoses. There are many such, some local and others constitutional, which yield to treatment with vitaminiferous foods. To include everything which is benefited by the lactovegetarian regimen is, however, to go too far. Under the seventh head, prevention, the authors say that the two localities to be kept under observation constantly are the buccal cavity and the feet, while at the same time the diet must be carefully supervised both as to content and degree of cooking. Under actual treatment, the extracts which contain vitamines from whole rice, etc., and foods rich in the same, should be given. Finally, the authors assert that they have not the least doubt that trench foot is essentially an avitaminosis.

Soamine in Bronchial Asthma.—Ghost (Glasgow Medical Journal) recommends soamine in the interval treatment of true bronchial asthma. Some few cases improved on autogenous mixed vaccine, but several cases that improved with soamine failed to improve the vaccines. The cause of irritation giving rise to reflex paroxysms should always be sought. In cases in which egg albumen brings on asthma or urticaria, marked improvement occurs under calcium lactate and soamine. Cases showing no increase of eosinophiles in the blood do not improve under soamine, but these cases are few. The plan of treatment consists in giving one grain of soamine by hypodermic injection and increasing one grain with each injection until three grains are reached. At first the injections are given twice a week, and later, as the conditions improve, once a week for two or three injections. If paroxysms do not appear during this period, an injection may be given once a fortnight, and then once a month for one or two more injections. The number of injections required to produce total absence of paroxysms varied from six to eighteen—rarely more. Some patients, who used to have paroxysms almost daily, have been free from any attack for over a year. The mode of administration consists in boiling one mil of water in a teaspoon, dissolving a soamine tabloid in it, and then injecting the solution in the arm, after local disinfection with tincture of iodine. The injection is not very painful; sometimes small nodular masses form, but these eventually disappear. No untoward results such as dimness of vision or albuminuria were ever noticed. Cases with chronic kidney lesions should, however, not be given the treatment.

The doctor should always have an hemostatic in his case. There is liable to be need for it any minute.

Thromboplastin Solution (Armour) is a specific hemostatic and acts promtply.

Thromboplastin (Armour) is made from the fresh brain of kosher killed cattle. There is a certain amount of that blood clotting thing in an animal's brain and this is not used up when the animal's throat is cut. It is used up when an animal is killed with a hammer. In the Armour Laboratory kosher killed cattle brain is used in making Thromboplastin. That's why Thromboplastin Solution (Armour) works promptly.

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THE GRACILLIS MUSCLE IN EVOLUTIONARY EFFACEMENT.

At the time when man's fireside was in the seclusions of the treetops, the gracillis muscle was the largest and most important muscle of the body. Doubtless at that time it was not called the gracillis muscle at all. Much more likely, it was called the jumbo muscle. All through the works of descriptive anatomy respect for the sense of appropriateness is attested by the nomenclature made use of. Indeed the very names that are given to the different structures of the body, is very largely what is meant by the title Descriptive Anatomy, that is given to those works. The custom and practice of calling things just what they are, is as old as Adam. It is a scientific way of doing it. More than that it is the only scientific way. From age to age the practice has been passed on up to man.

In that stage of civilization which we now in self-aggrandizement style as having been primitive—then, when man's work was done for the day and he sought the seclusions and privacies and comforts of home, it was this muscle that hugged the tree-trunk as he glided upwards to meet his own. In those times it was also, the muscle of self-preservation. There were probably dangers to the perpetuity of the race flying through the air, but there were more dangers walking and creeping on the ground. Most of these ground travelers couldn't climb, and so the muscle that hugged the body of the tree, and that was ever being torn by the rough bark untiringly developed in reaction to emergency.

Ultra, is not a word that can properly be applied to science. Science is either man's best thought, or else it isn't science at all. This is a statement of cold scientific facts regarding the vestage of the anatomical structure of the past, that for the last few millenniums has been known as the gracillis muscle.

Full appreciation of the value of the logic of cold facts, holds up man's courage i ntimes of crisis, and the foregoing recital of the hardships through which, for humanity's sake, the muscle has passed, is for the purpose of mitigating somewhat the hurt to body and mind, that the gracillis muscle causes in these days of its desuetude. The appendix is the one structure that as yet has the most severely taxed the integrity of man's gratitude for past favors, and while it is not probable that the gracillis will ever put love of ancestry to strain, as has the appendix, still science would seem to warn man that the law of compensation runs regardless! Like the appendix, the gracillis muscle cripples man—and oftentimes robs the world of all that the man stood for, not in the exercise of constructive function, but in absolutely useless contraction it ears its tendon from its lessening hold upon the tibia, and the knee joint is put of commission. And all for nothing!

The loss of the use of the knee joint suddenly occurring in some persons, is no trivial matter, and the gracillis muscle is here written about because its useless spasmodic action lost the country the services of a medical officer.

After having spent nearly a year in the base hospital at Brest, the captain on furlough walking the streets of Paris was suddenly seized with violent tearing pain on the inner side of the knee joint. The tearing pain persisted even after he had tried to put the joint in a position of rest, and after the pain had somewhat subsided a depression marked the place that had been occupied by the tendon of the muscle. It was very plainly a case where highly organized and organizing cerebral structures were interfered with by a degenerating muscular structure. In other words, brain cell invented carpeted staircases, and mechanical elevators had robbed the gracillis of all incentive for existence, and then the muscular fibers dominated by the single power of contractility, made valueless to man the attainments of special skill in surgery. It will always be so. Evolution is a two-edged proposition. Reaction to environment is merciless. The anatomical structures that are built up by the exigencies of one age, apparently handicap progress in the next age. But only apparently so, however, because man is the evolutionary agent of evolution, and in the process of getting rid of the appendix man is forced in self-preservation to levels of greater and still greater achievements. The gracillis muscle, like the appendix is an ancestral liability, but evolution will see to it that the gracillis muscular structure which nurtured and protected the more slowly developing brain cell structure, shall not thereafter be allowed to defeat

the object and purpose of man's creation.

The injury to the officer's knee joint ought to and doubtless will entitle to a pension. The pain the doctor has undergone, and the drain upon the national treasury will be charged up to the gracillis. But on the other side of the account, credit must be given the gracillis for the worth of the brain stuff which it has enabled the doctor to put into life; and thus footed up, the account shows the gracillis muscle to have been a highly profitable investment. J. L. T.

INFLUENZA THE MOST DISASTROUS OF THE WORLD PLAGUES.

There is no other one disease that as a whole makes the physician feel more absolutely helpless to the patient than he is made to feel when he faces the task of having to care for a case of influenza, of sudden and violent onset. The known rapidity with which the infectious agent, whatever it is, undermines and breaks down the integrity of one physiologic function after another, absolutely rules out all rational hope that the element of time working together with that other element called Nature, may in some way bring about recovery. It is felt that irreparable damage was done at first impact of the infection with systemic life. This gloomy fact can be as eloquently written down by one physician, as by another. The feeling is not necessarily dependent upon a large personal experience in the treatment of the disease. A previous careful reading of what has been written about the course of the disease, and of what has been written regarding the findings at the autopsies, is sufficient to take courage out of the physician, as he recognizes in the patient the landmarks of dissolution. The exciting cause of the disease is an appalling, if not a paralyzing mystery.

As calculated from what is known of man in past civilizations, we believe with considerable of assurance, that the world has collected and recorded more facts that are genetic to Spanish influenza, than in any past age have ever been recorded of the influenzas of other geographical designations. Because we live in this age, we believe this to be true. To us, our own time is the wisest of all ages in things medical. Every age has had the same inflated ideas as to the importance of its own accomplishments. That's human. But so far the good that we have derived from our investigations of influenza, is nil. Some future good, only confidently hoped for, is the best we can make of it. It is hoped that study of the records that have been made during the last few years—records of epidemologic significance, of laboratory experiments, and of clinical observations—it is hoped that study of these records may disclose the specific pathogenic matter. At present the facts noted in one army camp seems only to contradict the conclusions that have been arrived at in another camp. Indeed an officer writing from the Great Lakes camp said that, "Any theory regarding anything connected with influenza, could be either proved or disproved by the facts gathered at that camp." For thousands of years Nature has been able to keep secret from man the specific cause of influenza; but as has been stated, the belief is that now, with all these gathered facts as aids, we are equal to the occasion?

In The New York Medical Record of April 26th, page [illegible], 1919, appears an article by Forrest Martin Harrison, M. D., that is somewhat along these lines, and which makes one feel better for having read it. The article is entitled, "Influenza Aboard a Man-of-War: A Clinical Summary."

The literary style of the writer is captivating, and after the reading of the article is finished, one lays it down with a long deep breath of satisfaction. He defines influenza as a pandemic disease * * * always characterized by extraordinary rapidity of expansion * * * special tendency to respiratory membranes * * * generally setting up a tracheobronchitis. The word always, as he uses it surely goes back to 412 B. C., which is a long enough time to justify its use. Two thousand years afterwards it killed Oliver Cromwell. At that time it was called "ague." Soon after that the French called it "la grippe." Italy gave it the name influenza meaning "influence," and to locate and circumscribe this subtle elusive destroyer of man in some specific pathogen, has for many centuries been the baffling objective of investigators. Pfeiffer thought he had located the infectious matter in the bacillus to which science has given his name, but at the present time the evidence seems to be overwhelmingly against Pfeiffer's claim. The disease has often been given the name of the country in which the particular epidemic was first noticed. The one that has just passed began in Spain last spring, swept over all Europe and nearly the entire world, and

then went back to its undiscoverable hiding place. It is probably due to return again when a non-immune population will be sufficiently numerous, for the disease to spread from one individual to another the world round. The fact that about forty per cent of the population is attacked by the disease would seem to show that the non-immune must reach at least that density, before an epidemic can occur.

Influenza brings to light a strange mental make up in humanity. If a few thousand men are killed in battle, the whole nation goes into mourning: while within the last year nearly a half million of lives have been lost through influenza, without the least show of emotion on the part ot the survivors. Eight out of every twenty people had the disease, and one out of the twenty died, without roughening the mental surface!

Influenza was always present onboard-ship, and extremes of climatic conditions had no influence upon the disease. One flflre-up of the disease occurred in Boston harbor, and one in Florida waters. The epidemic came and vanished with equal suddenness. Cold rectal irrigations proved to be useful antipyretics. Acetylsalicylic acid was given for pain. Ammonium chloride for cough. Patients were urged to drink lemonade. Prolonged hot irrigations of auditory meatus for ear ache. In warm climate patients were kept on main deck in the sunshine, with plenty of air, but with care to prevent chilliness, as warmth favored the bringing about of immunity.

THE SCIENTIFIC FUNCTION AND AIM OF THE MEDICAL SOCIETY.

It seems to be but courteously fitting that medical journalism should once in a while discuss collateral medical activities. To discuss the medical society under this title though, may possibly prompt the suggestion that from the point of view of the medical journal, there are other functions and aims of medical societies, besides the functions and aims that are strictly scientific. And there's the rub; that is to say there would be the rub, if the medical journal were claiming to be already all that scientific medicine—if it were claiming to be all that the medical society could reasonably ask of it. As a matter of fact, however, any thought that there is implied pharisaism in the title, is wide of the mark; as the most and worst that can be said of that which follows would be the complimentary criticism that stressing the worth of the society proceedings that are obviously scientific, puts an embarrassing burden of proof upon all features of the medical society? The answer to such criticism would be that true science never harms any one.

It goes with the saying that the physiologic entertainments; the physiologic banquets; and the psychology of professional fellowship—the recreation and all, are scientific functions. They are the spice of life, without which professional work would be stale and self-centered. Against such functionings there is no law, which is the other way of saying that every law governing in the physician's life demands that he avails himself of every opportunity that presents to attend the medical society.

The reward to the physician, and the benefit to the world for having thus been privileged for a time to live in forgetfulness of the routine of his work, is in the matter and fact that he returns to his care of the sick, a more useful citizen for having followed the lines of physiology in the direction of recreation. Heaven knows that there is enough of monotony in the affairs of those whom the physician cares for in their sicknesses, so that when he can go away for a few days and come back with a revived enthusiasm, his freshened spirit will be felt by his patients, and they will get from him somewhat of the benefits of a much needed vacation, which their circumstances make impossible to take. And to pass on sensible optimism, and courageous hopefulness, and virile perseverence into the lives of those with whom the physician has to do, is real practice of medicine.

Medicine and religion are cognate sciences. Medicine like religion needs constant revision. Medicine of yesterday isn't god enough for today. Neither will the religion of today be god enough for tomorrow. To say that a medical society of last year with all that went with it, ought to be copied this year, is just about as bad as for a man to say that, "A prayer meeting that was good enough for his mother, is good enough for him." To hark back to the past for something to copy from for a medical society meeting, is mental laziness; and to recall with adoration the "good old prayer meeting," represents moldy religion. The analogy between the life of medicine and the life of religion may with benefit, be carried still farther: When a member of a med-

ical society rises with a prescription blank in his hand, and begins to read a paper before the society, the members of that medical society are in the same fix as are those present at the prayer meeting, when some one in off-handed emotion, rises to offer prayer. There will be ust as much sense and thoughtfulness, and just as much of rambling and waste of time in each of the performances.

On the face of it the honor of being privileged to address a medical society, ought to be worth the preparation of a carefully prepared typewritten paper. Also, respect just for people and place and object of the prayer meeting should, one would think, call for a studious formulation of needs and wishes. Some medical societies haven't changed a bit in forty years, and an old man with a good memory can actually live over his young manhood days, by attending some present day prayer meetings. Prayers are sometimes offered, "to be heard of men"—there is the suggestion of broad phylacteries of humility, and all that; and just so are there some papers read before medical societies that, vulgarly speaking, carry the air of horn-blowing. That in medical societies which is physiologic, psychologic, ethical and hence upbuilding will take care of itself. There will not be too much of that. And yet the truer the science is, the more does it take upon itself the burden of carefully sifting and winnowing and blowing the chaff out of facts. Now, if medical societies return the compliment and discuss medical journalism, well and good!

ROPER HOSPITAL, CHARLESTON, MAY FACE GROWING DEFICIT IN MANAGEMENT EXPENSES. A LESSON TO BE LEARNED.

Announcement is made in the daily press that the Roper Hospital, Charleston, S. C., will be continued under the direction of the County Medical Society on the appropriation of $40,000.00 recently made for that purpose by the Charleston city council. However the medical society considers the sum inadequate and will continue to operate the institution under formal protest. $157.50 per day is the allowance as against the sum of $213 spent per day for the patients in the same hospital in 1905. If the management find the deficit growing too rapidly it is stated a further appeal will later be made again to the city council for additional funds.

This hospital is one of the most modern and well constructed in the South, and the record of its staff contains some of the most illustrious names in the history of Southern medicine and surgery. With rich traditions linking the old hospital to a glorious past, very recently, a new institution has been built with the best that modern makers so well know how to put in modern hospital construction, and it is expected, as was the old institution, to be run by the local medical society on a city and county appropriation. This arrangement now in vogue in the well known City-by-the-Sea was an ideal one a generation since, but both professional and hospital knowledge has alike advanced since those days, and a system once successful may, or may not, prove fully adequate to the times of the present day.

Formerly the hospital was the refuge of the absolutely deserted, and to a minor extent the abode also of the rich, but now, all seek its comforting folds when ill even with minor afflictions, and the problem of just how to best construct and manage hospitals for the masses is yet not all definitely determined.

Probably all are agreed that the chief thing needful are more hospitals and larger hospitals for the care of everybody, accepting charity patients and the opulent alike, but probably charging those able to pay, but turning none aside. Society must inevitably very soon come to a full realization of its manifest duty in the premises. The aevrage farmer is more considerate of his sick cattle, horses or sheep, than is the modern state, county or municipality, of the illness, ordinarily speaking, of its citizenry. We of the South recall when a slave was commercially valued at more than a thousand dollars—and daily in the damage suits do we realize the actual cash value society (under circumstances) puts on its every man, woman and child. We are strenuously insisting on their hour old eyes having an ophthalmia preventing solution dropped therein, smallpox prevention must be practiced, also typhoid fever preventive inoculations are given, the child is sent to the public schools, restrictions are thrown about his or her marriage later on, but at no time do we systematically endeavor to make sure that all sick (unless known to have distinctly communicable diseases) have proper housing or professional treatment.

Society continues derelict in its pronounced duty in the matter of providing sufficient hospital accommodations in each county of the state for the sick.

A county without a jailor, court house,

or county home for aged and infirm, appears woefully behind the times and such anomalous spectacle is not to be found in our borders, and yet how very few counties are even attempting to make proper provision for the care of their sick. The North Carolina legislature a few years since gave us an admirable law whereby any county may secure funds, construct, and maintain a county hospital at public expense, but the law is more noticeable in the non-observance than its observing. In at least one splendid county of great wealth too, the proposition which was carried to the people by red-blooded, man-loving doctors, met inglorious defeat at the polls. Progressive counties are having farm demonstrators working their whole time, and canning-club votaries are accomplishing much good, but we submit, the time is ripe here in the Carolinas in 1919, to turn to account the helpful lessons of the past, and inaugurate a systematized effort to establish in each county throughout the state a county hospital where every one seriously ill may have the best skill available, and thus have their chances of recovery greatly heightened over the uncertainties of care and nursing under the old home regime.

EXOPHTHALMIC GOITRE.

The study of four most excellent papers by Bram,* prompts this discussion. In a masterly way that stamps him a thorough working specialist on the subject of exophthalmic goitre, Bram discusses the etiology; the circulation; the course and prognosis; and the therapy of the disease.

Of course in exophthalmic goitre, the same as in all other diseases, etiology is of first importance. But discouragingly, in exophthalmic goiter, the same as in many other diseases, the cause of the disease is entirely unknown; and it comes about that the disease has to be studied and treated from the point of view of some speculative etiology. The makeshift is a necessary one, but the study of one speculation as to what starts the disease merely isolates that one theory, and there are many speculations and many theories.

Whether the cause of the disease is of endogenous production? whether the pathogen develops outside the body? whether the cause of the disease is of mind? or of matter?—these are questions that are asked regarding the make-up, so to speak, of the disease producing thing itself. But with the present chaotic etiology, question follows question, so that if in a particular case it was conclusively proven that the cause of the disease had been exogenous, then would be forced the other parts of the etiologic question, both as to the route by which the pathogenic entity had gained entrance to the body? and also as to the particular structure or organ upon which the pathogen first impinged? To discover and uncover these biologic secrets is always the striven for goal, in medical investigations.

Bram does not try to explain the unexplainable in exophthalmic goitre. In fact it would appear that he had studied other phases of the disease before he wrote about etiology. He quotes Tyson who says in substance, that there is nothing without the body, or within the body that may not be sufficient to cause the disease. Then Tyson reverses the proposition and says that exophthalmic goitre is a symptomatic sum total of the discordant functionings of all systemic life forces. Of course proving nothing, unless it may possibly point to the fact that nothing yet thought of, is the real cause of the disease.

In exophthalmic goitre the ausculted heart gives the impression that it is running away with itself. An engine with the governor belt off. Bram puts it that way. An increased steam pressure behind the engine ,and less of work for the engine to do. This illustration of physics, translated into terms of physiology reads, that (after secretion has been increased) the thyroid secretion over-stimulates the heart muscle through its toxic action upon the sympathetic, and dilates everything beyond the heart, by its inhibition of the vagus. After the trouble is once started it is self perpetuating, but in the large majority of cases theer is the dominating trend towards recovery, as the end result.

Into this bizarre pathology—into this pathologic commotion Bram throws his medical therapy. A successful therapy. A therapy that is very much more suc-

*Bram. Israel M. D. Philadelphia. The Etiology of Exophthalshrdlu cmfwypet pejpejpejj ology of Exophthalmic Goitre, Charlotte Medical Journal, March, 1919. do The Circulatory System in Exophthalmic Goitre. International Clinics Vol. 1, Series 29. do Course and Prognosis of Exophthalmic Goitre. Archives of Diagnosis January, 1919, do Successful Therapy of Exophthalmic Goitre. New York Medical Journal, February 22, 1919.

cessful, than is surgical therapy. Recovery from operation, does not spell out recovery from exophthalmic goitre. Surgery leaves the forces that caused the goitre still at work, and after a time a restored circulation, also restores the goitre. On the other hand something like specificity is aimed at by Bram in the giving of medicines.

Quinin hydrobromide (which of course is not claimed to be new treatment) is principally relied upon. It is apparently relied upon to search out, and destroy, and counteract the as yet unknown first cause of the disease. Also quinin conserves metabolism. As is put in Meyer and Gotlieb's Pharmacology, "Quinin may be said to retard the processes not only of life, but also of dying." Next in degree, reliance is placed in digitalis. Austin Flint used to teach in his classes that treatment of disease should have reference to the support of that organ or function, that was most likely to give out. Bram thus uses digitalis. Then in addition, the disease is carefully treated symptomatically.

DO PHYSICIANS READ THEIR PROFESSIONAL JOURNALS?

The above caption may seem rather an unusual title to give to an item in this Journal, but it is a fact that during the present year an enterprising traveling salesman who visits the offices of many reputable physicians has systematically taken note of the large number of medical journals found with unopened wrappers. The percentage was very high indeed, but we are inclined to believe the overworked state of the profession due to the large proposition of active medical men in the military service and the recent influenza epidemic, in large measure accounts for what this lynxeyed commercial tourist saw.

We believe the average doctor as a rule, promptly opens all his mail, and reads more or less, a considerable portion of the articles in his journals. The doctor who does not is distinctly the loser, for never in the history of our profession have we had a periodical literature of higher grade than now.

And this remark is equally true of trade publications as well, a noteworthy illustration of which may be found in "The Pharmacal Advance," issued monthly from 168 Duane Street, New York. Each number is replete with short, crisp articles which will well repay the busy doctor's time spent in perusal.

EDITORIAL NEWS ITEMS

The State Board of Health anti-typhoid vaccination campaign begins in ten Eastern North Carolina counties June 15, and will be continued in other counties as rapidly as may be feasible.

The South Carolina State Medical Association, at its annual meeting, held in Florence, April 15-17, 1919, elected the following officers for the ensuing year: President, Lieut.-Col. E. W. Pressley of Greenville; First Vice-President, Dr. D. M. Smith of Florence; Second Vice-President, Dr. O. C. Shecut of Orangeburg; Third Vice-President, Dr. C. A. Mobley of Rock Hill; Secretary and Treasurer, Dr. J. P. Taylor of Adams Run; State Board of Examiners of Optometrists and Opticians, Dr. E. M. Whaley of Columbia.

Davidson College, Davidson, N. C., conferred the degree of LL. D., on Dr. John Peter Monroe of Charlotte, N. C., a distinction alike creditable to the institution and honorable to its distinguished recipient who was for a number of years the head of the North Carolina Medical College, late President of the North Carolina State Medical Society and recognized as one of the strong and forceful leaders of the medical profession.

A class of one hundred and five graduate nurses appeared before the recent session of the North Carolina State Board of Examiners for Nurses at Raleigh, N. C. Drs. J. M. Parrott, Kingston, N. C., and Delia Dixon-Carroll are the medical members of the examining board.

The 32nd Annual Convention of the American Association of Orificial Surgeons will be held September 15, 16, 17 at the Congress Hotel, Chicago. The forenoons will be given to operative demonstrations at the hospital.

The program will be replete with the addresses, essays and papers by prominent Orificialists. The clinics will be interesting as usual.

The Buncombe County Medical Society, Asheville, N. C., were recent special guests of the U. S. Army Hospital for Tuberculosis at Ateen, Azalea, N. C., a special movie illustrating the diagnosis of pulmonary tuberculosis being given complimentary to the body of visiting physicians.

Dr. Margery J. Lord, Asheville, N. C., has been designated chairman of the drive in North Carolina to raise the state's pro rata of the proposed quarter million dollars for the American Women's Hospitals. Dr. Delia Dixon Carroll, Raleigh, has been named vice-chairman for the Raleigh district.

Dr. G. A. Roberts, for a dozen years past of the department of veterinary medicine, State College, Raleigh, N. C., has resigned his position and will remove shortly to San Paula, Brazil, where he will become veterinarian in the Hygienic Laboratory of the San Paula Medical School.

Dr. David A. Stanton, former Secretary of the State Medical Society of North Carolina and one of the State's most reputable medical gentlemen, has just been elected mayor of High Point, N. C. We extend congratulations to the citizens of that progressive city. Any modern city is to be congratulated on securing the services in the mayor's chair of so competent a business man and one versed in the many scientific problems confronting the high grade management of present day municipalities.

Dr. J. H. Shuford of Hickory, N. C., has recently returned from Camp Dix, N. J., where he has been in the service for several months. He also served in France for several months. His rank was major. Major Shuford will re-open his hospital as soon as possible.

Dr. John W. Moose died May 12th at his home in Poolville, Texas. He practiced medicine there for several years and was regarded by the laity and physicians of that country as a very skilled physician. Before he went to Texas he practiced in Cabarrus County for several years. He graduated from the North Carolina College at Mt. Pleasant in 1877. Subsequently he graduated in medicine at the College Physicians and Surgeons in Baltimore. During the time he practiced in Cabarrus County he was located at Mt. Pleasant.

The Raleigh, N. C. press announce that after June 1, 1919, members of the Raleigh Academy of Medicine will charge $3.00 per visit to homes and $2.00 per office visit as against former prices of $2.00 and $1.00.

Dr. C. V. Reynolds who was recently elected President of the North Carolina Medical Society was a few days ago reappointed city health officer of Asheville. Dr. Reynolds has been health officer of Asheville for several years and it is generally admitted that no health officer in any city in North Carolina is superior to him in health work. Dr. Reynolds has associated with him very competent help. His bacteriologist, his meat and milk inspector are very proficient and attend to their respective duties in an intelligent way.

It has been announced from New York that Dr. Annie L. Alexander of Charlotte, N. C., has been selected as a member of the committee to start a nation-wide campaign to raise $250,000 for the American Women's Hospitals. The headquarters of this committee is 637 Madison Avenue, New York City. The drive which will continue until June 10th, is designed to raise funds for Serbia and the far east.

The part of work assigned Dr. Alexander will be a success for it will be attended to energetically and intelligently.

Mr. H. E. Miller has been designated to succeed Mr. Warren H. Booker, C. E., as Chief Sanitary Engineering and Supervision N. C. State Board of Health. He is a graduate of the University of Michigan, was health officer for Flint, Mich., later in charge of the department Sanitary Engineering of the Ohio State Board of Health, with the Virginia State Board of Health, and more recently discharged from service as lieutenant in the U. S. Army.

Dr. T. M. West, Fayetteville, N. C., delivered the address to the graduating class of nurses at the Sanford Hospital recently.

Dr. Cyrus Thompson, Jacksonville, N. C., member N. C. State Board of Health, delivered the address to graduating nurses at the recent commencement at the Highsmith Hospital, Fayetteville, N. C.

Shelby, N. C., is, at a very early date, to erect a $50,000 hospital. It is to be built as a memorial to Cleveland County's 700 soldiers and the 33 who were killed in action or died in camps. It is to be a county institution and patients all over the county are to have the benefits to be derived from such an institution.

Dr. W. S. Rankin, Secretary N. C. State Board of Health, announces the designation of Dr. A. J. Warren as his assistant in the office of Secretary. Dr. Warren is a graduate of Tulane University of Louisiana, has had two years experience as practicing physician in Hillsboro, N. C., and made an enviable record later as health officer, whole time, for Rowan County, N. C., removing recently from Salisbury to Raleigh to accept this position in the Secretary's office.

Dr. John N. Upshur of Richmond, Va., Honored.—On the first of this month, about twenty-five physicians of this city gathered at the home of Doctor Upshur and presented him with a handsome silver pitcher and waiter in honor of his fiftieth anniversary in the practice of medicine. The pitcher bears the following inscription: "To Dr. John Upshur, a token of regard and admiration from certain of his professional friends on the occasion of his fiftieth anniversary in active practice, April 1, 1919."

Although seventy-one years of age, Dr. Upshur is still active in the practice of his profession and is recognized as one of the prominent physicians of this State. He is an ex-president of the Medical Society of Virginia and of several local societies.—Virginia Medical Monthly.

Dr. E. W. Pressly, formerly of Clover, S. C., will in the future practice medicine in Greenville, S. C.

When the base hospital at Camp Sevier was built Dr. Pressly entered the service as a lieutenant and remained in that hospital until he was recently discharged with the rank of colonel and for several months before the hospital was discontinued he was commanding medical officer of the hospital.

Dr. Pressly is one of the most prominent physicians of South Carolina. He has served on the board of medical examiners of that state and is an ex-president of the South Carolina Medical Society. Greenville is to be congratulated on securing the services of such a competent physician.

The State Board of Health of North Carolina announces that Dr. C. W. Armstrong has succeeded Dr. A. J. Warren as whole time health officer of Rowan County.

Rowan County is one of the ten counties which is co-operating with the state board of health in the three-year plan of county health work. The first 16 months of the Rowan work was conducted very successfully by Dr. Warren, who has recently been appointed assistant state health officer. The striking results which have been accomplished in the county have been along the lines of treating defective school children, preventing soil pollution diseases by sanitation and vaccination, and quarantine and educational work.

United States Pharmacopoeial Convention of 1920.

Article VIII, Chapter 1 of the By-Laws of the United States Pramacopoeial Convention provides that the President "shall issue, on or about the first of May of the year immediately preceding that of the decennial meeting, a notice inviting the several bodies, entitled under the Constitution to representation therein, to send delegates to the next meeting. He shall repeat the notification, eight months later, and shall request the medical and pharmaceutical journals of the United States to publish the call for said meeting."

Article 2 of the Constitution provides: "The members of the United States Pharmacopoeial Convention, in addition to the incorporators and their associates, shall be delegates elected by the following organizations in the manner they shall respectively provide: Incorporated Medical Colleges, and Medical Schools connected with Incorporated Colleges and Universities; Incorporated Colleges of Pharmacy, and Pharmaceutical Schools connected with Incorporated Universities; Incorporated State Medical Associations; Incorporated State Pharmaceutical Associations; the American Medical Association, and the American Chemical Society; provided that no such organization shall be entitled to representation unless it shall have been incorporated within and shall have been in continuous operation in the United States for at least five years before the time fixed for the decennial meeting of this corporation."

Section 2 of the Constitution provides: "Delegates appointed by the Surgeon-General of the United States Army, the Surgeon-General of the United States Navy, and the Surgeon-General of the United States Marine-Hospital Service, the Secretary of Agriculture, the Secretary of Commerce and Labor, the Association of Official Agricultural Chemists, the Association of State and National

Food and Dairy Departments, the National Wholesale Druggists' Association, and the National Dental Association, and by the organizations not hereinbefore named which were admitted to representation in the Convention of 1900, shall also be members of the corporation. Each body and each branch of the United States Government above mentioned shall be entitled to send three delegates to the meetings of this corporation. But no such delegates as are provided for in this article shall be members until their credentials shall have been examined and acted upon as provided for by the By-Laws."

In the discharge of the above required duties, I hereby ask all competent and designated bodies and authorities to name and issue credentials to the fixed number of delegates to the tenth decennial Convention to meet in Washington, D. C., on the second Tuesday of May, 1920, at 10 o'clock a. m. at a hall to be designated hereafter. The appointed delegates are requested to promptly forward their credentials to Noble P. Barnes, M. D., The Arlington Hotel, Washington, D. C., assistant Secretary of the Convention, who will file them for consideration of the Committee on Credentials which will be appointed by the President not later than March fifirst, 1920, according to the requirements Chapter VII, Article 1 of the By-Laws.

Done at Washington, D. C., May 5, 1919.

HARVEY W. WILEY,
President of the United States Pharmacopoeial Convention.

The Pharmacal Advance.—That the members of the medical profession in this as well as in other portions of the globe are very prone to formulate opinions of their own based on a probably greater degree of thoughtful observation and study than is exercised by the vast majority of the members of every other trade, profession or vocation, is doubtless a truth to which most will agree. Hence the tendency manifested at times to stifle independent medical journalism, to frown down upon every effort to promote genuine liberalism in thought and practice, is a proposition that demands most careful consideration at the hands of the men of our profession who propose to continue to do at least a portion of their own thinking, and who contend they should themselves be their own judges of what kind or type of journalism they prefer. Many men of many minds compose the hundred and fifty thousand American doctors of medicine, and equally true it is that there must, and should always continue to be, a variety in the types of professional mental pabulum offered to physicians for their regalement and edification. The stately dignified medical magazines, especially catered to by the teachers of medicine; the possibly more generally read and appreciated journals which actually tell you what to do when a man is sick with a certain disease, rather than indulging in verbose statements as to the intrinsic tendencies of the disorder to eventuate in recovery or otherwise, even the less noted and quoted medical papers which make a specialty of giving prescriptions for a variety of therapies—all have alike a fitting place in the appreciative consideration of the profession, and assuredly we shall continue to have at least a few of all kinds of medical journals.

Readable in character, instructive alike to physician and druggist, rather out of the beaten paths in frequent utterances. Short articles on subjects of vital concern to doctors, the "Pharmacal Advance" is a publication which is always interesting, entertaining, as well as instructive to its many medical readers.

Of the many medical magazines coming to this office, it is one that always contains something that will catch and fix the interest until one has read it through. Published by the Pharmacal Advance Publishing Co., 168 Duane St., New York, at regular intervals, it has a claim on the interest of the average practitioner and merits appreciative attention.

Misdeeds of the Wassermann Reaction.—Thibierge (Presse Medical) states that for more or less obvious reasons, which will occur to everyone at all acquainted with the technic and results of the Wassermann test, that over-confidence should not be placed in this reaction. It should not be depended upon as a guide for treatment during the first year of infection, but it may be applied occasionally during that time as an indication as to whether or not the treatment should be intensified. It should not affect the rule against marriage before four years after infection, except to lengthen this time where it is positive. If, however, the initial treatment has been vigorous, and repeated tests give a negative reaction, it might be safe to marry three years after incision.

BOOK NOTICES

"The Merrymakers in New York." The lively adventures of four young people. By Herschel Williams, illustrated by John Goss. Price $1.50.

This book is a story of life in New York City, told by the writer in such a fascinating way that it will hold the attention and interest of the reader from start to finish. The story begins with a visit of the four Merrymaker children to New York City to spend the Christmas holidays with their big brother Ned who is a reporter on one of the large newspapers of New York City. Jack Gore, a friend of Ned's, begs to be allowed to help entertain the Merrymaker children, whom Marje, the older girl and commonly called the little mother of the family, dislikes very much at first. The adventures of the other children told in their own language will gain the admiration and approval of the old folks, awakening the memories of their own childhood days, as well as amusing and entertaining the young people.

This book, of 321 pages with several very fine illustrations, is nicely gotten up and neatly bound. The print is excellent. The author is a very brilliant writer and certainly knows something of life in New York City. The book is an all round good novel, one that would do honor to any library teaching many wholesome lessons in unselfishness.

"Tweedie," the Story of a True Heart, by Isla May Mullins, author of "The Blossom Shop," "Anne of the Blossom Shop," "The Mt. Blossom Girls," and other stories; illustrated; the Page Company, Boston. Price $1.50.

This little book of fiction is the story, entertainingly told, of a young woman, just from college, who believed that women's sphere was one that among other things does not include matrimony. The appearance of a young doctor, who incidentally gets notoriety when his ship is sunk by a German U-boat, and he escapes, serves in the end to overturn the plans of the young girl for living a simple life. "Tweedie" who enters the story as a patient in a hospital where "Dr. Creel" attends her, plays a big part in the story. She is Swiss and she possesses that rare degree of simplicity and faith, so infrequently found today, that makes her a big influence, although she plays the role of servant. It was largely through "Tweedie's" innocent shaping of affairs that everything turned out as it did.

The book is a pleasing account of some modern day ideas, and of the final winning out of the basic influences and instincts in a woman's life.

"Light Therapeutics," a practical manual of phototherapy for the student and the practitioner. With special reference to the incandescent electric-light bath. By J. H. Kellogg, M. D., author of "Rational Hydrotherapy," "The Art of Massage," etc. Member of the British Gynaecological Society, the International Periodical Congress of Gynaecology and Obstetrics, American and British Associations for the Advancement of Science, the Societe d'Hygiene of France, American Society of Microscopists, American Climatological Society, American Medical Association, Michigan Medical Society, Superintendent of the Battle Creek (Mich.) Sanitarium, Battle Creek, Mich. The Good Health Publishing Co., Publishers of Therapeutic Manuals.

We take the following paragraph from Dr. Kellogg's preface which, within itself, gives a very good idea of the book.

This work does not profess to be an exhaustive treatise on the subject of light therapy. It is intended rather to serve as a practical manual for the clinical use of the electric-light bath in its various forms, and in its various applications, general and local. An effort has been made, in a small way, to correlate the electric-light bath to those other forms of rational physiotherapy which naturally and profitably associate themselves with this newest of physical curative measures.

The book is a paper bound volume of 217 pages. It is beautifully illustrated and is certainly a useful manual for the student and general practitioner.

"The Practical Medicine Series," comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. ix, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume I General Medicine, edited by Frank Billings, M. S., M. D., head of the Medical Department and Dean of the Faculty of Rush Medical College, Chicago. Part 1 assisted by Burrell O. Raulston, A. B., M. D., resident pathologist, Presbyterian Hospital. Part 2

assisted by Bernard Fantus, M. S., M. D., associate professor of therapeutics, Rush Medical College, Chicago. Series 1919. Price $2.50. Chicago, The Year Book Publishers, 304 South Dearborn St.

The present volume is one of a series of eight, issued at about monthly intervals, beginning in May, and covering the entire field of medicine and surgery. Each volume being complete on the subject of which it treats for the year prior to its publication. These volumes which will subsequently appear are published primarily for the general practitioner at the same time the arrangements in several volumes enable those interested in special subjects to buy only the ones they desire.

The book is beautifully gotten up and completely indexed. Its illustrations are numerous and adds a great deal to aid the reader in grasping the ideas that otherwise might be difficult. No books come to my office that I value more than these books and I refer to them frequently.

"Operations of Obstetrics." Embracing the surgical procedures and management of the more serious complications by Frederick Elmer Leavitt, M. D., formerly assistant professor of obstetrics and gynecology, University of Minnesota; obstetrician to the city and county hospital, the St. Paul Hospital, the Bethesda Hospital, etc., St. Paul, Minn., with 248 illustrations. Price $6.00. St. Louis, C. V. Mosby Company, 801-809 Metropolitan Bldg., St. Louis, Mo.

The subject of this book which is entitled, "Operations of Obstetrics," from the operator's point of view, only enough pathology and physiology being introduced to give reason for and insight into the various procedures described. The author believes that the treatment of this subject from this angle will find justification in the hope and belief that the general practitioner, as well as the specialist in obstetrics, will find such a book helpful.

The most of the material in this book has been gathered from Dr. Leavitt's personal experience. He has also incorporated in this book the findings and thoughts of other writers on this subject.

The engravings, without exception, are from specially prepared drawings made by the author, or by his artist, Mr. George M. Erieson.

The book contains 466 pages, printed in thick enamel paper and its 248 illustrations appear to be as complete and as accurate as possible. Mr. Erieson has certainly done his work well. Any physician or surgeon who is interested in this specialty can hardly afford to do without the book if he wants to know the latest and most scientific methods on the subject.

"Outline of Genito-Urinary Surgery," by George Gilbert Smith, M. D., A. C. S., Genito-Urinary surgeon to out-patients, Massachusetts general hospital; assistant visiting surgeon, Collis P. Huntington Memorial Hospital; Captain Medical Corps, U. S. A.; Fellow American College of Surgeons; Member of the American Association of Genito-urinary Surgeons and of the American Urological Association. Authority to publish granted by the Surgeon-General, U. S. A. Illustrated by H. F. Aitken. Price $2.75. Philadelphia and London. W. B. Saunders Company.

This book has been written with the idea of presenting to students and to general practitioners the important points in the symptomatology and pathology of genito-urinary diseases. The treatment of these conditions, in so far as it deals with medicine or with minor surgery, is given in full; when major surgery is indicated, enough of the technic is described to give the medical reader an intelligent opinion as to the nature of the operation, its aims and its dangers.

Dr. Smith has not only incorporated in this book the methods of technic that are up to date but he has also incorporated his own personal experience in a Massachusetts hospital.

Dr. Smith is naturally in this branch of medicine. He writes beautifully and any one who is at all familiar with the chapters in this book can recognize his great ability. It will certainly give me pleasure to recommend the volume. Mr. Aitken who furnished the illustrations for the book certainly did his work well. The volume contains 301 pages and is very accurately indexed.

"Diet in Health and Disease," by Julius Friedenwald, M. D., professor of Gastro-Enterology in the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore, and John Ruhrah, M. D., professor of diseases of children in the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore. "These few rules

of diet he that keeps, shall surely find great ease and speedy remedy by it."—Burton. Fifth edition, reset. Price $6.00. Philadelphia and London. W. B. Saunders & Company.

The fifth edition of this work is good evidence that the book has been appreciated by medical men who are interested in this very important part of medicine.

There are scarcely any subjects in medicine that have received the same amount of attention of recent years as dietetics and the study of nutrition.

The authors have not included a great deal of the immense literature that have been published on this subject in the last few years but they have incorporated in this magnificent volume what in their opinion is the best ideas on the subject.

Much of our knowledge on nutrition is fragmentary and the exact value of many contributions cannot be estimated until further investigations have been made. Dietetics has always been a subject much influenced by fads and fancies and much of the literature has little value in consequence.

The authors have endeavored to give fully the various facts relating to the composition of foods, to indicate as far as possible in the space of one volume the scientific basis, when there is any, for the various diets and to give at the same time practical directions and diet lists which can be used without extensive training.

The authors of this book have brought together within a comparatively small number of pages the best of the modern thought upon the subject and the reviewer believes that they have accomplished a great deal in writing a book so up to date, so scientific and so valuable.

The first thought of the medical student or graduate as relates to equipment, is a hypodermatic outfit and a clinical thermometer. They are as essential in the practice of medicine as a carburetor to a gasoline engine.

Everything about an automobile may appear to be perfect. Given a faulty carburetor, however, and the whole outfit is unsatisfactory. On the other hand, the engine—including its heart the carburetor —may be in perfect working order, yet a poor grade of gas will hinder its power development and a samll hill will suffice to cause the whole works to choke. To be stuck on a grade is embarrassing if not indeed serious.

An analogous situation is the well trained physician with a good hypodermatic syringe and a poor quality of hypodermatic tablets. His ability for rendering the most efficient service at all times is greatly reduced if the hypodermatic tablets do not measure up to the fullest requirements for medication. They should give flash-like response in the matter of solubility and therapeutic activity. Tardy disintegration and imperfect solubility indicate lack of refinement in manufacturing processes and suggest, but do not necessarily prove, that there may be deficiency in therapeutic properties.

It is a source of satisfaction to a physician to feel that all uncertainties in reference to a particular make of hypodermatic tablets are eliminated. He can not afford to feel otherwise, for his reputation is at stake in so many emergencies calling for hypodermatic medication.

The Lilly label on tubes of hypodermatic tablets is considered by many prominent physicians sufficient assurance that the contents are absolutely dependable. In a crisis it is certain that no physician would care to take a chance on anything less than the best hypodermatic tablets that the market affords. The Lilly tablets are hand molded and quickly soluble. The ingredients are carefully tested before molding and the finished tablets are again tested after molding for solubility and accuracy of grainage.

Reconstruction After Protracted Illnesses

Following a protracted illness the system is left depleted of strength, and the urgent indication is for an agent that will add richness to the blood-stream and put fresh vitality into the tissues.

For this purpose cod liver oil is of the utmost service combining as it does the qualities that make the ideal reconstructive. But the gastric function has been impaired too, and plain cod liver oil is not well tolerated. Hence a palatable preparation of cod liver oil must be selected, and there is none better than Cord. Ext. Ol. Morrhuae Comp. (Hagee). Containing all of the therapeutic and nutritive essentials of cod liver oil, Cord. Ext. Ol. Morrhuae Comp. (Hagee) is palatable in a high degree and is tolerated by the weakest stomach, a feature that makes it of exceptional value in states of general debility such as those following a protracted illness. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is everything that plain cod liver oil is except disagreeable.

Miscellaneous.

Herpes Zoster: Its Cause With Varicella.—Cranston Low, in The British Medical Journal, reports three cases of herpes zoster, each of which was followed by one or more cases of chickenpox either in the same family or in the same hospital ward, after an interal of nineteen, thirteen, and two days respectively. These cases support similar observations made first by Bokay in 1892 and since then by a number of other observers. In all the recorded cases the chicken-pox eruption appeared in from eight to twenty-one days after contact with a case of herpes zoster. In one of the author's cases, two days interval only elapsed between the appearance of herpes zoster and chicken-pox but as both patients had been inhospital for some time, the infection was probably brought by visitors. The converse condition, that is chicken-pox followed by herpes zoster, has also been reported by several observers, but not so frequently. Further, cases have been recorded from time to time in which herpes zoster and a varicella-like eruption have occurred in the same individual. These facts would lead one to conclude that the two conditions are due to the same virus. The author would go further, and suggests that in herpes zoster the infection is probably local, through the nose, along the lymphatics, round the olfactory nerves, as has been shown to be the mode of infection with the virus of anterior poliomyelitis, which has many points of analogy with herpes zoster. Once the virus reaches the meninges and cerebrospinal fluid, it is easy for it to get to the ganglia on the sensory nerve trunks. In chicken-pox there is probably a blood infection with the virus. In cases in which the two conditions appear, the virus probably attacks the ganglia first and four or five days later, gets into the general circulation. Microscopically, the vesicle in herpes zoster is similar to that seen in the early stages of varicella. The lesions in chicken-pox occur in groups, suggesting that a small branch of the peripheral nerve is the seat of a focus of infection. Moreover, many of the chicken-pox lesions show a vesicle with no inflammatory halo around it, as is seen in pemphigus and dermatitis herpetiformis, which are generally considered to be nerve lesions. These facts would seem to show that the eruption in varicella is primarily not due to the virus settling in the end capillaries of the skin but in the nerve endings or minute nerve twigs in the skin. No casual organism has yet been discovered in chickenpox or herpes zoster. It is possible that the virus belongs to the group of filter-passing ultramicroscopic organisms mentioned by Flexner in his Huxley lecture as being the cause of poliomyelitis and vaccinia among other diseases. Since both chicken-pox and herpes zoster occur in epidemic form, if they have a common origin one would expect simultaneous epidemics to occur. The only instance on record is that reported by Heim as occurring in Budapest during April and May, 1912. As neither disease is notifiable, statistics are wanting. As regards immunity, an attack of chicken-pox usually conveys immunity for life. Similarly, an attack of herpes zoster is rarely followed by another; most of the recurrent attacks are attacks of peripheral neuritis due to pressure by a tumor on nerves. An attack of varicella does not necessarily protect the individual against herpes zoster. It is possible that an attack of herpes zoster may confer immunity to chicken-pox, but individuals who have herpes zoster in many cases are past the age when they are likely to have the former. Further knowledge is required on this point. In cases of herpes zoster which occur whilst arsenic is being taken, the question arises whether the arsenic produces an arsenical neuritis with the eruption in the distribution of the nerve, or whether the arsenic renders the nervous system more susceptible to infection with herpes zoster. The latter would seem to be the more probable explanation, because even although the patient continues to take the arsenic, the herpes zoster runs a normal course, heals up, and does not recur. Parkes Weber, moreover, reports an instance in which a patient was taking arsenic and developed herpes zoster with a generalized varicella-like eruption, and another patient from the same ward developed chicken-pox fifteen days later.

Nasal Obstruction in Aviators.—Captain Douglas Guthrie, in The London Lancet, points out the importance of good binocular vision and normal ears to the air pilot. We must remember that the ear is not only the organ of hearing, but also an accessory organ of equilibration. In addition to a sound heart and sound lungs, a stable nervous system, and a healthy "mentality," the aviator must possess good vision, on which he mainly depends, and a sense of equilibration. It

is regrettable that the latter which is so highly developed in birds and may be so accurately estimated in man by the Barany tests, has received so little attention. Free nasal respiration is an important asset to the flying man. He has had occasion to examine and operate on a number of officers suffering from nasal obstruction and, from his experience, summarizes as follows the baneful effects of such a condition in the aviator: (1) Effect on the lungs. It has been experimentally demonstrated by Mendel that the amount of air which the mouth breather inhales with each breath is less by one-fifth than the amount inhaled in normal nasal respiration. It follows, then, that if the subject be an aviator he will readily suffer from symptoms of "Oxygen-want." (2) Effect of equilibration. The Eustachian tubes, the function of which is to adjust the pressure of air within the middle ear to the changes produced by sound-waves, atmospheric pressure,, etc., and which come into use so largely during flying, are impaired in their function if any nasal obstruction is present. During a rapid descent the tympanic membranes are driven inwards by atmospheric pressure, causing deafness and earache. Normally these symptoms disappear if the ears are "inflated" by swallowing or by movement of the jaw. But if the nasal passages are blocked so that air does not freely reach the Eustachian tubes the alteration of pressure within the middle ear cannot be compensated and the symptoms persist, perhaps with the addition of giddiness caused by altered labyrinthine tension, communicated from middle to inner ear through the round and oval windows. Under such circumstances the risk of a crash is naturally considerable. (3) "Reflex" effects. A third possible result of nasal obstruction is headache coming on in the air or after landing. This is in many cases due to deflected nasal septum against the middle turbinal, the so-called reflex nasal headache. The commoner causes of nasal obstruction are adenoids, hypertrophic rhinitis, and septal deviations. In the majority of cases examined obstruction was due to deformity of the nasal septum, the patient usually giving a history of former injury at boxing or football. In some cases there was almost complete obstruction of both nostrils; in others, symptoms were nil. Aggravated cases of septal deformity require treatment naturally, but the wisdom of operating on minor degrees of deviation in cadets is questionable, since absolute symmetry is rare. It should be noted, however, that a degree of nasal obstruction which would cause little trouble on the ground may be very troublesome in the air, for at heights over 7,000 to 10,000 feet the mucous membrane of the nose becomes swollen and engorged and any existing obstruction is greatly aggravated. In the treatment of such cases, the main object, from a military point of view is to render the patient fit as quickly as possible, and therefore local anesthesia is advisable. A method which answers well is to pack both nasal cavities half an hour before operation with 10 per cent. cocaine, and at the same time give a hypodermic of morphine and atropine. After-treatment consists in packing both sides with ribbon gauze wrung out in liquid paraffin, a dressing which adapts itself to the tissues and is easily removed on the following day. Treated in this way, septum cases need remain in hospital for only a few days.

Laxatives and the Physician.

When you prescribe a saline laxative you expect to remove as quickly as possible from the gastro-intestinal tract the retained products of food ingestion and other toxic substances which are harmful to the patient.

The laxative should be prompt and efficient in its action—thoroughly evacuating the colon, if possible, without griping or discomfort.

For such a laxative we recommend PLUTO WATER. It stimulates intestinal secretion and movement and with varying dosage acts as a mild aperient or a free cathartic.

The French Lick Springs Hotel Company at French Lick, Indiana, will be pleased to forward sample bottles at no expense to the medical profession—who are under no obligations whatsoever.

The Epileptic Attack.—Jelliffe, in The New York Medical Journal, approaches the problem of epilepsy from a dynamic point of view which would look upon many disease manifestations not as entities in themselves but as expressions of faulty energy discharge. The human machine, as a whole, is considered as a transformer of the energy acquired or captured from the universe in which he lives. The modes of transformation are metabolic, sensorimotor and psychic. Therefore many epileptic attacks, not all, may be looked upon as a faulty energy discharge of the entire human being, rather than of an isolated organ or part of an organ. Explanation and therapeutic

approach have been long unsuccessfully made upon the metabolic or physico-chemical level or the sensori-motor in some partial manner of attack. A practical basis is now also being sought, the writer states, from the psychical side. This means more than a superficial psychological approach which merely observes and classifies results of certain potent factors. It must enter truly within the psychical life through the dynamic or energy concept. Consideration of the three different forms or levels of energy discharge of the human organism explains the variety of epileptic phenomena and the predominance sometimes of one set of phenomena, sometimes of another. Interference with any one level alone may check or repress the explosive force only to cause disturbance in some other part of the organism. Even psychological description of inadequate reaction to difficulties becomes of value only as it enters the whole field of the patient's energy, transformation and discharge. It is necessary to enter into the patient's extreme egocentricity and the limitation and hampering of his energy through this, which have always marked his reactions to the environment. This demands exhaustive analytic work but it enlists the co-operation of the patient and a reasonable and high demand upon the guiding and controlling of his emotions and instinctive life through his intelligence. It necessitates an alertness of attention upon the shiftings and interchangings of energy which exist in the patient. It means research in the unconscious life for infantile wish impulses and immature tendencies which seek to express themselves in a world of reality where they do not work. The epileptic is in this more extensively and exclusively egoistic than the ordinary neurotic, and the profundity of unconscious return in the classical convulsion indicates the depth of the ego unconsciousness, which at such times completely controls, at all other times colors all his modes of action and thought. This extreme egocentricity is accomplished by a shallow readiness of approach which marks the external superficialty of effect. This makes it difficult to rouse the patient's interest in the treatment but signifies rather than denies the strong emotional content which is so deeply bound with an external compulsive form of action, which also indicates this emotional separation of interests, with the intensity of the profoundly hidden ones. The love life shows the same superficial aspect on the one hand and absorption in the infantile on the other. This background is not a successful one for facing reality, and so at times the struggle resolves itself through the convulsion into absolute control on the part of the unconscious of all levels of activity, psychic, sensorimotor and metabolic, and this works in deterioration to such a permanent control. Various writers have recognized the emotional factor underlying the epileptic attack and have been inclined to separate off an emotional or hysterical epilepsy from a genuine epilepsy. This seems to the writer not well founded and also unnecessary in the light of the energy concept. Practically, the same approach through psychoanalysis must be made in order to understand the psychical side and therefore the complete working of the dynamic process in the production of any or all of these forms of attack. The convulsion sometimes represents a direct flight into sexuality, but sexuality of a distinctive infantile nature. —Medical Standard.

Association of Rickettsia Bodies in Lice with Trench Fever.—Arkwright, Bacot, and Duncan (British Medical Journal) conclude that very close correlation exists between the presence of rickettsia bodies in lice, or their excreta, and trench fever. They conducted many carefully controlled experiments which show that large numbers of these bodies can almost invariably be found in the excreta or the bodies of lice about ten days after the latter have fled on a trench fever patient. Daily examination of lice after an infecting meal shows evidence of these bodies for the first time on the fifth day, when they are present in small numbers only. Their numbers rapidly increase during the next three or four days. When a box of lice has once become infected with these bodies they continue to be present for periods of two or three weeks, or until all the fedlice are dead. Not all the lice from an infected box show the rickettsia bodies, only a small proportion doing so in the first week, while the great majority are infected by the second and third weeks. The lice can be infected by trench fever patients during the fever, between the attacks, or even several weeks after an attack. Normal lice, fed on persons who have never had trench fever, do not show rickettsia bodies. From these and other experiments, including innoculation tests on volunteers, the presence of rickettsia bodies in lice is shown to be directly associated with trench fever.

Intestinal Stasis.—This condition of chronic constipation accompanied by intestinal fermentation and other sequelae can best be permanently relieved by assisting Nature to do her own work. Prunoids encourage and gently induce the intestinal canal to resume its normal action, and effect this object without causing pain or producing the after results which rarely fail to follow the use of the ordinary purgatives and laxatives.

Syphilis in the Debilitated.

A mistake many make is to crowd mercury in debilitated syphilitics because of an obstinate lesion. In all probability in such cases the condition is made worse rather than better by further reducing the patient's resisting powers through increased resistance that the natural recuperative powers may be brought to normal, thus permitting better utilization of the specific treatment.

For this purpose a tissue food such as Cord. Ext. Ol. Morrhuae Comp. (Hagee) is indicated and should be employed. In fact, with many physicians the plan of treatment in all cases includes Cord. Ext. Ol. Morrhuae Comp. (Hagee), their logic being that by its use the resisting powers of the tissues are increased, and in consequence the disease is diminished in virulence.

Impeded Bile Flow.—When the bile flow becomes obstructed, unpleasant consequences soon ensue. Treatment should be promptly instituted to stimulate the hepatic function and at the same time reduce the congestion of the biliary passages. Chionia in conjunction with regulation of the diet will quickly effect these results. A teaspoonful should be given every four hours and the headache, digestive disturbance, and other disagreeable symptoms will rapidly disappear.

Mr. C. H. McDowell, Director of the Chemicals Division of the War Industries Board during the war, and President of Armour Fertilizer Works for many years has been chosen to act in an advisory capacity to Bernard Baruch on the American Commission negotiating peace in Paris. Mr. McDowell, who is en route to Paris where headquarters will be established will work on the economic and after the war phases of the chemical and raw material problems. He is well known in chemical, agricultural and business circles throughout the country, has had a vast experience in chemical lines and will prove a valuable aid to the committee.

The work in Paris, Mr. McDowell said would be with the raw material side of the chemical problems of reconstruction, including dyes, ferro alloys, potash and agricultural chemicals, from a commercial and economic view point. Mr. McDowell is going to Paris at the special request of Mr. Baruch, formerly chairman of the war industries board who is now in Paris studying problems growing out of industrial reconstruction. He will be accompanied by Donald Riley, former Lieutenant Commander of the United States navy who has charge of the procurement of chemicals and explosives for the navy during the war. Mr. Riley is a son of Harrison B. Riley, President of the Chicago Title and Trust Company.

Mr. McDowell has been with Armour and Company for thirty-two years starting as a secretary to Mr. Philip D. Armour.

Insect Bites.

While on a hunting trip in Northern Canada I was severely bitten with black flies; those diminutive devils of the Northern woods. As it was quite late in the season we thought it unnecessary to take precautions against flies and mosquitoes, and other than applications of bicarbonate of soda I had no treatment for several days.

At one of the Hudson Bay posts and in Toronto, physician friends made applications endeavoring to give me relief, but without any success. After several days my face and hands were swollen to about twice their normal size; the pain and itching were almost unbearable. At Toledo, Ohio, one of my physician friends took charge and for several days did his utmost to stop the action of the poison, and as a sort of hopeless last resort proposed trying Antiphlogistine. Having been without sleep for about two weeks and with the nervous system almost completely shattered, I was willing to give anything a trial.

The first application stopped the burning, and several more completely reduced the swelling, after the combined efforts of these three frinds had faild to afford me a particle of relief.

I have gone into this rather extensively in the hope that some other sufferer who is susceptible to insect bites may be prepared and not forced to undergo any such amount of distress as I did.

DR. I. W. COPELAND,
Ashland, Ohio.

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SOUTHERN MEDICAL SOCIETIES

SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION
Annual Meeting at Baltimore, Md.,
December 17-19, 1918.
H. A. Royster, Secretary,
Raleigh, N. C.
I. S. Stone, M. D., Pres.,
Washington, D. C.

SOUTHERN MEDICAL ASSOCIATION
Annual Meeting at Asheville, N. C.,
November 11-14, 1919.
Seale Harris, M. D., Sec.,
Birmingham, Ala.
Lewellys F. Barker, Pres.,
Baltimore, Md.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA
Annual Meeting at Richmond, Va.,
February, 19-20, 1919.
Dr. R. S. Cathcart, M. D., Pres.,
Charleston, S. C.
Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA
Annual Meeting at Pinehurst, N. C.,
April, 1919.
Benj. K. Hays, M. D., Sec.,
Oxford, N. C.
Cyrus Thompson, M. D., Pres.,
Jacksonville, N. C.

SOUTH CAROLINA MEDICAL ASSOCIATION
Annual Meeting at Florence, S. C.
April 15-16, 1919.
Edgar A. Hines, M. D., Sec.,
Seneca, S. C.
James A. Hayne, M. D., Pres.,
Columbia, S. C.

MEDICAL SOCIETY OF VIRGINIA
Annual Meeting at Richmond, Va.,
October, 1919.
Paulus A. Irving, M. D., Sec.,
Farmville, Va.
Ennion G. Williams, M. D., Pres.,
Richmond, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
Annual Meeting at Mobile, Ala.,
April 21, 1919.
H. G. Perry, M. D., Sec.,
Montgomery, Ala.
Isaac L. Watkins, M. D., Pres.,
Montgomery, Ala.

STATE MEDICAL ASSOCIATIO OF TEXAS
Annual Meeting at Waco, Texas,
May 13-15, 1919.
H. Taylor, M. D., Sec.,
Fort Worth, Texas.
S. P. Rice, M. D., Pres.
Martin, Texas.

AMERICAN MEDICAL EDITORS' ASSOCIATION
Annual Meeting at Atlantic City, N. J.,
(Date not decided) 1919
J. MacDonald, Jr., M. D., Sec.,
92 Williams St., New York.
G. W. Kosmak, M. D., Pres.,
New York.

FLORIDA MEDICAL ASSOCIATION
Annual Meeting at Miami, Fla.
(Date not decided)
G. E. Henson, M. D., Sec.,
Jacksonville, Fla.
Frederick J. Walter, M. D., Pres.,
Daytona, Fla.

MEDICAL ASSOCIATION OF GEORGIA
Annual Meeting at Atlanta, Ga.
April 16-18, 1919.
J. W. Palmer, M. D., Pres.,
Ailey, Ga.
W. C. Lyle, M. D., Sec.,
Atlanta, Ga.

KENTUCKY STATE MEDICAL ASSOCIATION
Annual Meeting at Ashland, Ky.,
October, 1918.
Arthur T. McCormack, M. D., Sec.,
Bowling Green, Ky.
P. H. Stewart, M. D., Pres.,
Paducah, Ky.

LOUISIANA STATE MEDICAL SOCIETY
Annual Meeting at Shreveport, La.,
April 8-10, 1919.
P. T. Tolbot, M. D., Sec.,
New Orleans, La.
W. H. Knolles, M. D., Pres.,
New Orleans, La.

MISSISSIPPI STATE MEDICAL ASSOCIATION
Annual Meeting at Hattiesburg
(Date not decided) 1919
T. M. Dye, M. D., Sec.,
Clarksdale, Miss.
W. S. Leathers, M. D., Pres.,
University, Miss.

TENNESSEE STATE MEDICAL ASSOCIATION
Annual Meeting at Nashville.
(Date not decided) 1919
Olin West, M. D., Sec.,
349 Doctors' Bldg., Nashville, Tenn.
Richmond McKinney, M. D., Pres.,
Memphis, Tenn.

The Influenza Menace

INFLUENZA (with its sequela of pneumonia) is said to have caused more deaths than occurred in the American army in France. It is still widely prevalent. Fresh outbreaks are reported in many places where the epidemic was thought to have subsided. Danger lurks everywhere.

The situation demands that every possible precaution be observed.

Prophylactic vaccination is the rational procedure. In one locality, where several thousand persons were vaccinated before the appearance of symptoms, not a single death occurred.

Influenza-Pneumonia Vaccine

(Prophylactic)

This vaccine, the formula of which was suggested by Dr. Rosenow, is offered to the medical profession with confidence in its efficacy as an immunizing agent. It is composed of cultures newly isolated from cases occurring during the prevailing epidemic. Each mil (Cc.) contains five billion bacteria, in these proportions:

Diplococcus pneumoniæ, type I	500 millions
Diplococcus pneumoniæ, type II	750 millions
Diplococcus pneumoniæ, type III	500 millions
Diplococcus pneumoniæ, type IV	1250 millions
Streptococcus hemolyticus	1000 millions
Bacterium influenzæ (Pfeiffer)	500 millions
Staphylococcus pyogenes aureus	500 millions

Used only as a prophylactic of influenza and the pneumonia that sometimes follows.

Initial dose, ½ mil; second dose, 1 mil; third dose, 1½ mils—at intervals of seven days.

20-mil bottles; price (list)	$3.50
5-mil bulbs; " "	1.00

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Charlotte Medical Journal.

A SOUTHERN JOURNAL OF MEDICINE AND SURGERY.

VOLUME 79
NUMBER 2

Charlotte, N. C., February, 1919

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is a palatable aid to digestion; an agreeable vehicle for iodids, bromids, salicylates, etc., and supplies the curdling ferment for making junket.

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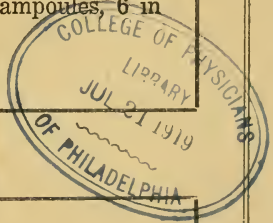
is physiologically standardized and is entirely free from chemical preservatives. 1-2cc and 1cc ampoules, 6 in box.



Extract of Red Bone Marrow

is a great reconstructive and will be found of value to patients convalescing from Influenza and other troubles.

Armour's Surgical Catgut Ligatures

are the finest thing of the kind on the market; they are strong, smooth and sterile. Plain and 10, 20, 30 and 40 day Chromic, sizes Nos. 000 to 4, inclusive. At present, 60 inch lengths only.

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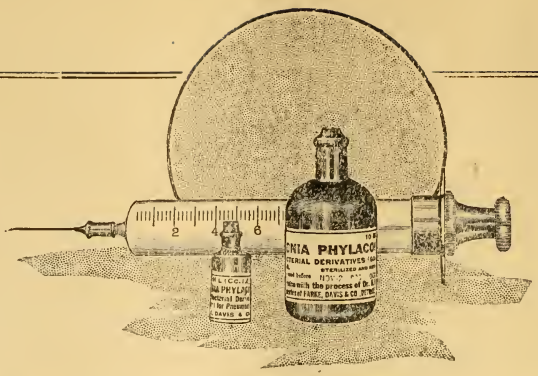

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BECAUSE of its frequency and high mortality pneumonia is rightly regarded as one of the most serious diseases with which the medical profession has to contend.

It is said upon good authority that approximately ten per cent. of all deaths in the United States during recent years have resulted from pneumonic infection.

These facts suggest this question: Is it justifiable to adopt "expectant treatment" when a product of specific character is available?

Experience leads to the conviction that almost every case of pneumonia seen within twenty-four hours after the initial chill will terminate in recovery if perseveringly treated with Pneumonia Phylacogen.

To obtain the best possible results Pneumonia Phylacogen should be employed in the early stage of the disease. Its administration even in mild cases is earnestly recommended, as by its use the duration of the disease may be curtailed and grave developments prevented.

Bio. 605. Bulbs of 10 mils, one in a package.
Bio. 607. Bulbs of 1 mil, five in a package.

NOTE.—Attention is directed to the new Phylacogen Syringe pictured above. This is an ideal instrument for the administration of Pneumonia Phylacogen. It is fully described in our catalogue.

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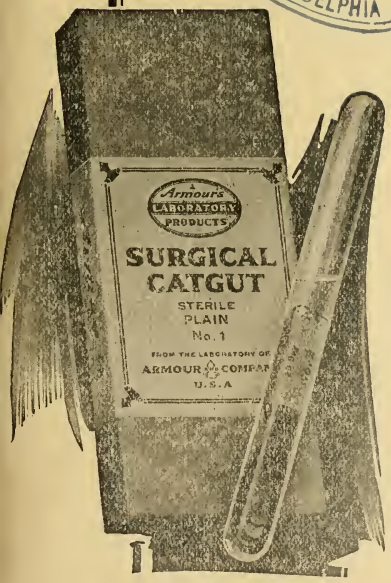

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is now a necessity. Special precaution should be taken to protect your health.

STOP THE SPREAD of INFLUENZA germs now prevalent. Create a clean healthy atmosphere by the constant and daily use of the reliable

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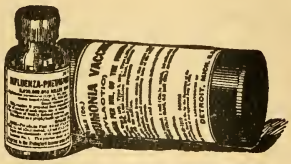

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Prevention with Influenza-Pneumonia Vaccine

CONVINCING evidence in support of specific prophylaxis in influenza is afforded by hundreds of reports on the use of our Influenza-Pneumonia Vaccine (Prophylactic). This vaccine, prepared in strict accordance with the formula of Dr. E. C. Rosenow of the Mayo Foundation, is composed chiefly of pneumococci, streptococci and influenza bacilli, all cultures being freshly isolated from cases occurring during the recent epidemic. Results from its use in military camps and other places where influenza has prevailed leave no doubt of its prophylactic value.

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PROOF of the efficacy of Pneumonia Phylacogen in the *treatment* of influenza is abundant and convincing. This Phylacogen has been used in many sections of the United States with highly satisfactory results. Cases so treated and reported during the recent epidemic number many hundreds, the percentage of recoveries being surprisingly large. One physician has used Pneumonia Phylacogen in over a hundred cases without a fatality. He gives an initial dose of Phylacogen (1 mil) with the first sign of fever, repeating in four to six hours.

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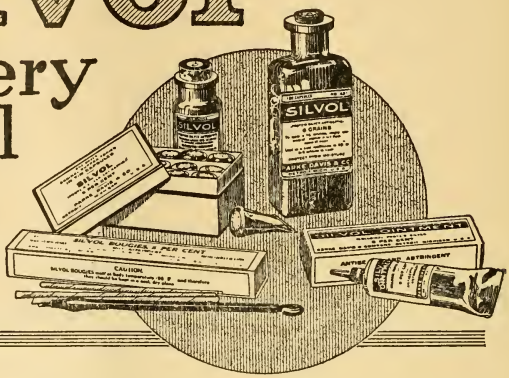

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December 17-19, 1918.
H. A. Royster, Secretary,
Raleigh, N. C.
I. S. Stone, M. D., Pres.,
Washington, D. C.

SOUTHERN MEDICAL ASSOCIATION
Annual Meeting at Asheville, N. C.,
November 11-14, 1919.
Seale Harris, M. D., Sec.,
Birmingham, Ala.
Lewellys F. Barker, Pres.,
Baltimore, Md.

TRI-STATE MEDICAL ASSOCIATION OF THE CAROLINAS AND VIRGINIA
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February, 19-20, 1920
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Richmond, Va.
Rolfe E. Hughes, M. D., Sec.,
Laurens, S. C.

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April, 1920
Benj. K. Hays, M. D., Sec.,
Oxford, N. C.
Carl V. Reynolds, M. D., Pres.,
Asheville, N. C.

SOUTH CAROLINA MEDICAL ASSOCIATION
Annual Meeting at Florence, S. C.
April 15-16, 1919.
Edgar A. Hines, M. D., Sec.,
Seneca, S. C.
James A. Hayne, M. D., Pres.,
Columbia, S. C.

MEDICAL SOCIETY OF VIRGINIA
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October, 1919.
Paulus A. Irving, M. D., Sec.,
Farmville, Va.
Ennion G. Williams, M. D., Pres.,
Richmond, Va.

MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
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April 21, 1919.
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Montgomery, Ala.
Isaac L. Watkins, M. D., Pres.,
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(Date not decided) 1919
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G. W. Kosmak, M. D., Pres.,
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(Date not decided)
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Frederick J. Walter, M. D., Pres.,
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W. C. Lyle, M. D., Sec.,
Atlanta, Ga.

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P. H. Stewart, M. D., Pres.,
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W. H. Knolles, M. D., Pres.,
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(Date not decided) 1919
T. M. Dye, M. D., Sec.,
Clarksdale, Miss.
W. S. Leathers, M. D., Pres.,
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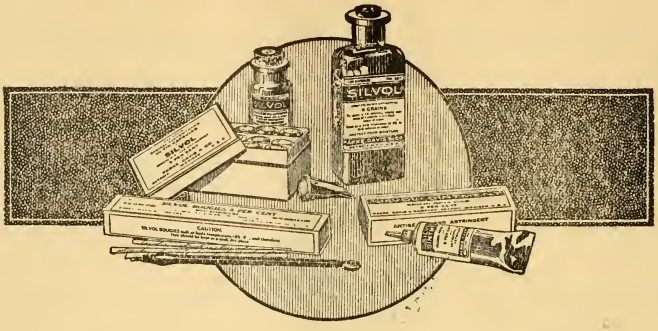
Olin West, M. D., Sec.,
349 Doctors' Bldg., Nashville, Tenn.
Richmond McKinney, M. D., Pres.,
Memphis, Tenn.

For Eye, Ear, Nose, Throat and Genito-Urinary Organs



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VOLUME 79
NUMBER 6

Charlotte, N. C., June, 1919

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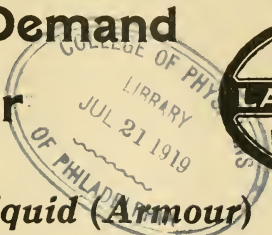

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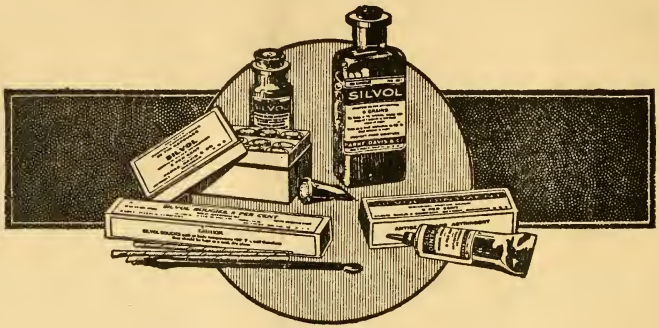

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